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Teaching Case

Teaching Data Literacy Through Operational Analytics: A Car Wash Case Study

Kevin Mentzer
Kevin.Mentzer@nichols.edu

Robert Russo
Robert.Russo@nichols.edu

Nathaniel Lawshe
Nathaniel.Lawshe@nichols.edu

Elizabeth Mullen
Elizabeth.Mullen@nichols.edu

Nichols College
Dudley MA

Hook

"I know our washes are popular, but are they profitable? And how do I really know which location is pulling its weight?" Matthew Auger, Director of Operations at Soapy Noble Express Car Wash, stared at the dashboard display on his laptop. Since implementing a new point-of-sale system across 13 New England locations, he had access to more transactional data than ever before. Now, he was hoping someone could help make sense of it all.

Matthew had commissioned an outside consulting firm to examine the data, and more importantly, to deliver recommendations. He wanted to know: Are monthly plans helping or hurting revenue? Are certain locations underperforming? Are we missing business during certain hours or days? With over a dozen sites, thousands of daily transactions, and no shortage of operational decisions to make, Soapy Noble needed answers, and they needed them fast.

Abstract

This case introduces students to the application of business analytics and data visualization techniques in a real-world operations setting. Students are tasked with analyzing transactional data from Soapy Noble Express Car Wash, a fast-growing regional car wash chain, to uncover patterns in customer behavior, location performance, and plan usage. The case challenges students to apply Excel-based analytical tools, interpret results, and develop actionable recommendations for the Soapy Noble management team. First-year undergraduate students are encouraged to explore both internal and external data sources, including census demographics and weather patterns, to add context and enhance their findings. The case is designed for introductory-level courses in data literacy, analytics, or CIS and emphasizes teamwork, critical thinking, and communication.

Keywords: Data Literacy, Project-Based Learning, Business Analytics, Excel, Operational Decision-Making

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Kevin Mentzer, Robert Russo, Nathaniel Lawshe, and Elizabeth Mullen

1. INTRODUCTION

As data becomes increasingly central to decision-making in every industry, developing data literacy, including the ability to read, analyze, interpret, and communicate with data, has emerged as a critical competency for the modern workforce (Carlson & Johnston, 2015; Wolff et al., 2016; Mentzer et al. 2024). Employers across sectors consistently identify data competency as essential not only for analysts, but for all professionals responsible for strategic thinking and operational improvement (Miller & Hughes, 2017). This widespread need reflects a shift toward data-informed culture across all organizational levels, requiring graduates to be fluent in both data interpretation and evidence-based reasoning.

Yet, for many undergraduate students, data remains abstract, locked in textbook problems, isolated spreadsheets, or hypothetical scenarios that do not mirror real business complexity. Prior research has noted that learners benefit most when they engage with authentic data and real-world problems, which promote motivation, relevance, and long-term skill retention (Gould, 2010; Kolodner et al., 2003). Project-based learning (PBL), an instructional method that situates students in realistic roles with complex, open-ended challenges, offers a powerful pedagogical bridge between theory and applied practice (Blumenfeld et al., 1991; Bell, 2010).

PBL immerses students in sustained inquiry and collaborative problem-solving, encouraging deeper cognitive engagement and fostering both technical and soft skills. Research has shown that PBL not only increases student motivation and confidence but also improves their ability to transfer knowledge across contexts (Thomas, 2000; Barron & Darling-Hammond, 2008). These benefits are particularly relevant in data-focused education, where students must learn to navigate ambiguity, clean and interpret data, and develop actionable insights. Furthermore, introducing project-based learning early in the curriculum has been associated with increased student interest and persistence in STEM and analytics-related fields (Dierker et al., 2018).

This teaching case, "Teaching Data Literacy Through Operational Analytics: A Car Wash Case Study," is designed as a project-based learning experience for students developing foundational data analysis skills. Students assume the role of an external consulting team hired by a regional car wash chain to analyze operational data and make strategic recommendations to senior management. By integrating real transaction records with external datasets such as weather and census information, students are challenged not only to build technical proficiency in Excel and visualization tools, but also to apply data to support meaningful business decisions, embodying the core principles of project-based learning.

Working with real transaction data and optional external sources, students will explore customer behavior, pricing models, and performance across multiple locations. The case challenges students to use Excel as their primary analysis tool, applying descriptive statistics, visualizations, and business reasoning to deliver a professional, data-driven presentation. By engaging students through a hands-on, scenario-based project, this case supports not only the acquisition of data literacy skills, but also the broader development of analytical mindset and professional readiness—key outcomes for twenty-first century learners.

2. MOTIVATION

As any seasoned CIS or Analytics faculty member will tell you, we are always on the search for good datasets to use in our classes. As a result, sites like Kaggle.com and data.gov are frequently perused to find good sources of data. While these sites offer a variety of data sources, they also have some limitations. In the case of Kaggle.com, the datasets provided are frequently aimed at challenges that far exceed the skills of first-year students. On the other hand, data.gov frequently has datasets that are either too simplistic or fail to interest the students due to the nature of the data available.

Next, we consider the cases that have been published in the *Information Systems Education Journal* (ISEDJ) which supplies cases for faculty to use in the fields of Information Systems

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(CIS/MIS) and Analytics. We compiled a list of the cases published in the past 6 years (2020 through 2025). Overall, we identified 39 teaching cases (See Appendix E for list). We extracted the key words from each case and generated the word cloud below (see Figure 1). Unsurprisingly, the word cloud is a varied who's who of skills used in the MIS/Analytics.

Figure 1. ISEDJ Prior Cases Keywords Word Cloud

Of those 39 cases, 23% (n=9) supplied the data to be used with the case. We also classified each case based on the intended audience and found that 25.6% of the cases were aimed at an Introductory level, 51.3% (n=10) were aimed at Upper level courses, 10.2% (n=4) were aimed at Graduate level courses, and the remaining 12.8% (n=5) were aimed at both Upper level and Graduate level courses (see Figure 2).

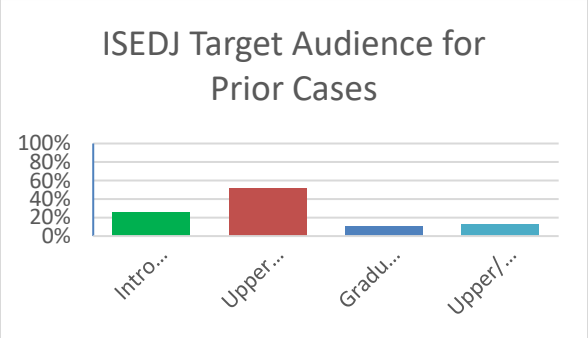

Figure 2. ISEDJ Target Audience for Prior Cases

When considering the combination of Introductory cases that also provided a dataset only 2 cases fit these criteria and neither of these cases supplied a novel dataset but instead relied on already publicly available datasets. It is important to note that we found several cases that provided links to datasets that were no longer available, suggesting that cases that rely on publicly available datasets should consider also supplying that data when submitting a case.

This case aims to fill these gaps by providing a) a novel dataset not previously available b) a case aimed at introductory level students either taking an Introduction to MIS/Analytics or a Data Literacy course, c) a case with a dataset large enough to challenge students and allow them to find hidden insights, and d) a case easily relatable to students.

By completing this case, students will be able to:

- Apply descriptive statistics to identify usage trends.
- Develop visualizations (e.g., pivot charts, time series) to support decision-making.
- Interpret transactional data to evaluate business performance.
- Compare performance across multiple business units (locations).
- Analyze the viability of a monthly membership program.
- Integrate external data sources to enhance analytical insight.
- Synthesize findings into clear, professional recommendations.

3. COMPANY BACKGROUND

Soapy Noble Express Car Wash (soapynoble.com) is a regional chain with 13+ locations across New England. The company offers a fast, automated wash experience enhanced by free amenities including vacuums, air nozzles, and drying towels. Customers can pay per wash or enroll in a monthly unlimited plan. Soapy Noble prides itself on its "Noble Guarantee," a commitment to exceptional service and clean vehicles.

In early 2024, the company implemented a new point-of-sale system that provides detailed transaction-level data. Leadership is now eager to use this data to make informed decisions about pricing, operations, staffing, marketing, and expansion.

4. PROJECT OVERVIEW

Students are placed in the role of an external consulting team hired to help Soapy Noble interpret and act on its newly available data. The management team has asked for assistance in evaluating:

- Which locations are over- or underperforming
- Patterns in daily/weekly usage
- Patterns in seasonality usage
- Profitability of the monthly unlimited plan
- Service mix and pricing effectiveness
- Broader market factors (e.g., demographics, weather)

Students are provided with a one-years' worth of transactional level data (approximately 1M rows) and encouraged to enhance their analysis with external sources (e.g., U.S. Census, NOAA weather data).

Analysis
Student teams are expected to:

1. Clean and summarize the data provided in Excel.
2. Use pivot tables and visualizations to identify key trends.
3. Integrate one or more external datasets to add depth.
4. Prepare a short report or presentation outlining findings and recommendations.

Optional tools like Tableau may be used for dashboarding, but Excel is required.

Deliverables
Each team must submit:

- An Excel workbook with labeled analysis and visuals
- A slide deck of a business presentation targeted to Soapy Noble management
- 1-page executive memo
- 2–3 strategic recommendations backed by data

Case Competition
We used this case as a case competition across 5 sections of the course *Data Literacy* which is a first-year course all students take and gives them the Excel, Word, and PowerPoint skills they need to succeed at a school whose majority of students are business administration majors. For each section, one professor each was assigned to teach the section. This project served as a class-level capstone, necessitating mastery of excel skills taught throughout the semester prior to beginning work.

Students formed groups by self-selecting teams of 2-5 students and had approximately 3-4 weeks in which to analyze the data, both in and out of class. During this time, professors disseminated the dataset through our LMS and allowed students in-class time to familiarize themselves with the data supplied. Once students looked over the dataset, professors undertook a Q&A session to help answer any questions about the data structure or definitions of what was represented. Professors additionally were instructed to only assist with executing student lead ideas and not interjecting their own thoughts or ideas into the groups.

After this initial brief, groups were allowed to work in and out of class to prepare for the section specific competition round. In this preliminary round, each section competed within itself to select the group with the highest likelihood of winning the overall competition. In a span of 3-4 weeks, students built their presentations during class while asking questions and checking in with the instructor. Weeks 1-3 consisted of data exploration, figure construction. Presentations generally took place on Week 4. . Some sections supplied a rubric to all students to assess their peers and others took notes to remember specifics about each presentation. Once the week concluded and all groups presented, professors would collect feedback and apply their own notes to select a winner from their section. This winner could also be awarded other benefits such as extra points on the final or relief from a final assignment if the professor so chose.

Before presenting to company leadership, winning teams met briefly with professors to discuss the format of final presentations. Lastly, the top team from each section then had 15 minutes to present to the management team of Soapy Noble along with other selected judges. The judges used the rubric (see Appendix C) to score each team and select the winners of the case competition.

Appendix D includes an example of one of the student presentations that made it to the final round.

Faculty Reaction
Observations from faculty regarding student handling of the case study were mostly positive, though there were some challenges to note. After introducing the project, some students seemed to exude a low level of confidence in the quality of the report they might produce. Instructors found that some students felt overwhelmed with the large number (approx. 1 million) of rows and variables in the data. Students also had difficulty understanding where to begin in their analysis. This is somewhat by design – students are told that they will encounter large data sets in the workplace, and it is important to become comfortable with analyzing them. Students were also understandably nervous about the possibility of presenting their analysis directly to the Soapy Noble management team.

To remedy these issues, students were instructed to create an analysis plan for their group. This involved having students write out the exact questions they needed to answer, what variables they would need to use to answer them, and what

they might expect to find. This seemingly increased the confidence students had and allowed students to find their workflow. Instructors should pay close attention to the confidence level of the class, as this is an intellectually challenging assignment.

The faculty also noted that students were quite interested in the fact that Soapy Noble is a local business, with some students having been customers. This grounded the importance of the project and increased the "real-world" feeling of the analysis for the students. The possibility that their analysis could have a measurable impact on a local business's operations seemed to appeal to students. Therefore, instructors might benefit from working with local businesses to leverage data analysis opportunities.

Lastly, faculty found that the wide range of student experience with computer technology could cause slowdowns with the analysis. This issue might apply especially in introductory courses. Before beginning this assignment, instructors should ensure that students know how to navigate file directories, save their work, understand the difference in file types, and understand differences between saving on a hard drive and in the virtual cloud.

Students also presented feedback to faculty. Overall, students found the work engaging and interesting, and useful, but also quite challenging in some circumstances. One student noted that, "I think the most challenging part was using the Tableau technology [and] gathering the data then finding a way to translate the data into words." Another student felt similarly: "…the most challenging part was working around the data to answer the questions, but it made me feel comfortable with data. I also had trouble with figuring out how each graph corresponded with the questions."

These observations are exactly the challenges that students should be working to overcome when learning how to analyze and present data.

How to AI-Proof this case

While there is no way to ensure that students do not use AI for some aspects of this case, there are several ways that faculty can ensure that students are not heavily relying on artificial intelligence.

First, given that the dataset contains over 1 million transactional records, it exceeds the processing capacity of most general-purpose AI tools, which are typically optimized for smaller text or structured input sizes. While AI can assist with tasks like interpreting Excel formulas or suggesting chart types, it is not capable of independently ingesting and analyzing large-scale datasets of this size without significant human preprocessing and summarization. As such, this case is intentionally designed to promote student engagement with real-world data complexity and to reinforce the need for foundational spreadsheet and visualization skills.

Second, consider asking students to tailor their analysis to different stakeholders. While AI can easily draft a generic response, adapting to differing roles requires an understanding of the business context.

Third, require students to integrate external data. While there are some obvious options here including weather and census data, do not provide that data. Force the students to find, justify, and cite their own sources for this data.

Fourth, incorporate peer collaboration and in-class work. Require drafts and live walkthroughs before the final analysis is submitted. Have students write up and explain the group interactions.

Fifth, require the students to submit their Excel spreadsheets showing the charts and tables found in their analysis.

Finally, require live presentations and be prepared to ask questions such as "why did you do this instead of that?" type questions. Ask what was most surprising and challenging of working with this data.

5. CONCLUSIONS

This teaching case provides an engaging, experiential approach to introducing data literacy and foundational analytical skills to first-year undergraduate students. By simulating a real-world consulting project for a growing regional business, the Soapy Noble Express Car Wash case offers a structured yet flexible platform for students to navigate large-scale datasets, apply Excel-based analysis techniques, and draw actionable insights from operational data.

The integration of internal transactional records with external contextual sources (e.g., census demographics, weather patterns) not only challenges students to think critically but also empowers them to make informed, data-driven recommendations grounded in business realities. This dual-layered analysis reinforces the value of

combining descriptive statistics with strategic reasoning, an essential skillset in today's data-centric professional landscape.

The case also supports pedagogical goals beyond technical proficiency. Through collaborative teamwork, iterative analysis planning, and a competitive presentation format, students practice communication, project management, and business storytelling. Importantly, the opportunity to present findings to a real client further elevates student motivation and cultivates professionalism.

Feedback from both faculty and students confirms that while the case is intellectually demanding, it is also rewarding. Students report improved confidence in working with complex datasets, while faculty observe increased engagement and a deeper appreciation for applied analytics. Moreover, the local nature of the client strengthens the relevance of the project and enhances student investment.

To summarize, this case addresses a critical gap in available teaching materials by offering an accessible, introductory-level analytics project with a novel dataset and real-world applicability. It encourages students to move beyond rote analysis toward holistic business thinking, an essential step in developing the next generation of data-literate professionals.

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APPENDIX A

Sample Data

Field	Value
Date	1/23/2025
Time	10:46:00 AM
Sale ID	30123285576923
Cash Out Location	XPT1
Employee Name	—
Customer Name	Rxxxxx Mxxxxx
Site	Soapy Noble | Niantic
Channel	Retail
Transaction Type	Sale
Transaction Status	Purchased
Line Item Action Type	Sale – Add Product
Product Type	Wash
Product Name	The Works
Quantity	1
Price	23.50
Subtotal	23.50
Tax	0.00
Discount	0.00
Total	23.50
Payment	0.00
Payment (abs)	—

APPENDIX B
Student Handout

To: External Consulting Team – [Your Team Name Here]
From: Matthew Auger, Director of Operations, Soapy Noble Express Car Wash
Date: March 25, 2025
Subject: Strategic Data Review & Recommendations Request

Dear Consulting Team,

We appreciate your partnership with Soapy Noble Express Car Wash. As part of our effort to make more informed, data-driven decisions, we have enlisted your team to conduct a comprehensive business analysis of our operational and sales data. Your findings will be presented directly to Soapy Noble's executive leadership team to help guide strategic planning across our 13 locations in New England.

We've recently upgraded our point-of-sale system and now have access to detailed transactional data. This includes timestamps, location IDs, product sales, payment types, and revenue metrics, all of which are vital to our analysis. However, we believe the most powerful insights come from combining internal data with context from the outside world.

Project Scope

Your primary task is to analyze our transaction dataset, assess performance across locations, and evaluate customer behavior and service usage. To enhance your insights, we strongly encourage you to incorporate relevant external datasets, such as:

- Census and demographic data: Income, population density, car ownership, etc.
- Weather data: Precipitation, temperature, or seasonal patterns that may affect car wash frequency
- Economic data: Consumer spending trends, inflation, fuel prices
- Local events or holidays that might explain spikes or lulls in business

Cross-referencing these external factors with our internal data will help reveal deeper patterns and support more targeted recommendations.

Key Questions

Your analysis should address the following:

1. Location Performance
    - Which sites are outperforming or underperforming, and why?
    - Are there external factors (e.g., population, income, traffic volume) influencing this?
2. Customer Usage Patterns
    - What are the busiest times of day and week?
    - How do trends vary across different communities or seasons?
3. Monthly Plan Effectiveness
    - Are monthly plan holders using the service frequently?
    - Are these plans financially beneficial to the company?
4. Service Mix and Pricing
    - Which washes are most popular?
    - Should we consider bundling, upselling, or adjusting pricing?
5. Strategic Recommendations
    - Based on your findings, what operational or marketing changes would you suggest?
    - How can we better tailor offerings to specific locations or customer segments?

Deliverables

Please submit the following:

- An Excel analysis workbook with tables and visuals (e.g., pivot charts)

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- A 10–20 slide presentation summarizing your findings and recommendations
- Optional: a dashboard (Excel or Tableau) for interactive exploration
- Clear explanations of how any external data informed your conclusions

Your final deliverable should be professional, insightful, and accessible to business decision-makers without a technical background.

What We're Looking For

We value:

- Accuracy and clarity in data analysis
- Thoughtful integration of external data for added context
- Actionable recommendations grounded in evidence
- Strong visuals and concise messaging

This is a real-world consulting engagement. We are relying on your work to help us elevate our business strategy and customer experience.

Thank you again for your collaboration. We look forward to your analysis and the insights you uncover to help Soapy Noble continue to deliver Noble Service and a Quality Wash across New England.

Sincerely,
Matthew Auger
Director of Operations
Soapy Noble Express Car Wash
https://soapynoble.com

APPENDIX C
Scoring Rubric

Evaluation Criteria -- Presentation

Category	1	2	3	4
Content Preparedness	Presentation of content is disjointed and incoherent; little evidence of preparation.	Content shows problems with succinct presentation; more preparation of the material is necessary.	Content is presented succinctly for the most part. Preparation is evident.	Content throughout the presentation is well presented succinctly; presentation is well-prepared and has obviously been well rehearsed.
Organization	Introduction does not give overview; organization is unclear, or presentation ends without conclusion.	Some overview is given; connection between introduction and presentation is sometimes unclear; conclusion is limited OR no introduction /overview or no conclusion.	Mostly effective introduction or overview of presentation; conclusion is appropriate.	Strong and engaging introduction provides overview of presentation; presentation supports introduction; conclusion reinforces main points in memorable fashion.
Visual Support	Visuals do not include graphs or tables to support the presentation; graphics are unattractive, detract from the content of the presentation OR No them/content-related graphics used.	Visuals (graphics, graphs and tables) could have been used more effectively to support the content of the presentation.	Most visuals are attractive; graphs and tables generally enhance the presentation; graphics are theme-topic related.	Visuals are attractive and effectively enhance the presentation; graphs and tables illustrate important points effectively; graphics are theme/topic-related.
Collaboration	No evidence of team work; no transitions made to next/previous speaker or topics.	Some evidence of team work; some transitions made to next/previous speaker or topics.	Evidence of team work; transitions to next/previous speaker or topics made for the most part.	Presenters worked as part of a team, providing effective transitions to next/previous speaker or making references to previous /next topics.
Presentation Delivery	Presenters do not communicate interest in topic; maintain little eye contact; do not use facial expressions and gestures effetely; inappropriate posture and/or appearance.	Presenters have difficulty communicating interest in topic and maintaining eye contact. Some facial expressions, gestures, posture, or appearance may not be appropriate.	Presenters communicate interest in topic, maintain eye contact for the most part; use appropriate facial expressions, gestures, and posture. Appearance is appropriate.	Presenters communicate interest in topic with energy and poise with energy and poise, maintain eye contract with audience, use facial expressions and effectively; posture and appearance convey confidence and credibility.

Guideline for the Content

Category	*1*	*2*	*3*	*4*
Presentation	The presentation failed to identify most problems and opportunities in the case. The presentation is vague and would not lead to useful analysis.	The presentation has identified some of the key problems/opportunities of the case. The presentation is general and only addresses some of the issues.	The presentation has identified most of the key opportunities of the case.	The presentation has identified all the key problems/opportunities of the case in a clear and concise way
Quality of Data Analysis	The analysis is superficial or simplistic. It does not cover most dimensions and does not go into details.	The data analysis is somewhat incomplete and only covers some dimensions and some details.	The data analysis is thorough for the most part. Data is analyzed from major dimensions. Data is analyzed in detail most of time.	The data analysis is thorough. Data is analyzed from many possible dimensions and in great detail.
Summary of Data Analysis	Summary of data analysis is incomplete or simplistic. The presenters fail to highlight any significant/interesting findings.	Summary of data analysis is somewhat incomplete and only covers a few significant findings.	Summary of data analysis is complete for the most part. The presenters are able to highlight most significant/interesting findings.	Summary of data analysis is complete. The presenters are able to highlight all significant/interesting findings.
External Data	The team failed to use any data beyond what was supplied to them.	The team used fairly limited external data which failed to present any new findings.	The external data used was appropriate and provided valuable additional insights.	Multiple external data sources were combined in the analysis allowing for advanced findings.
Team Recommendations	Recommendations fail to provide any insight on any analysis.	Recommendations are very limited and simplistic in nature.	Recommendations provide some insight on from the data analysis.	Recommendations were thoughtful, complete and insightful.

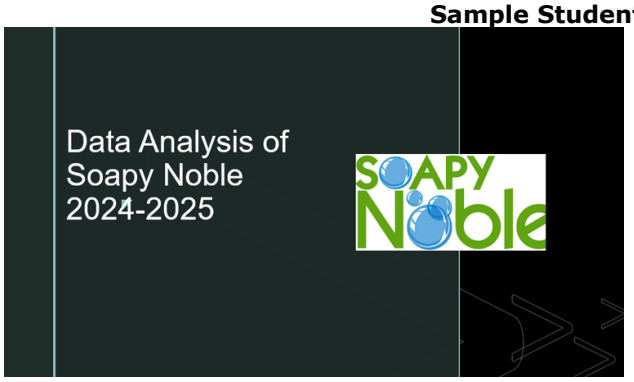
Case Competition -- Evaluation Form

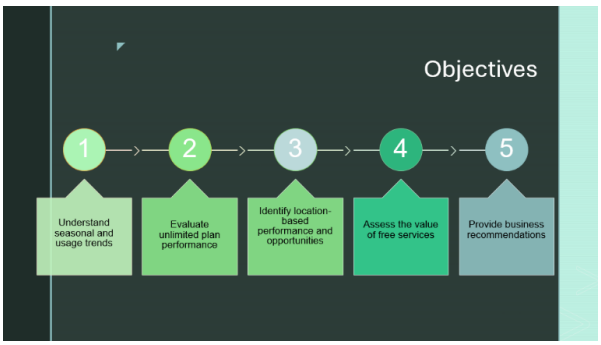
Evaluator Name: _____

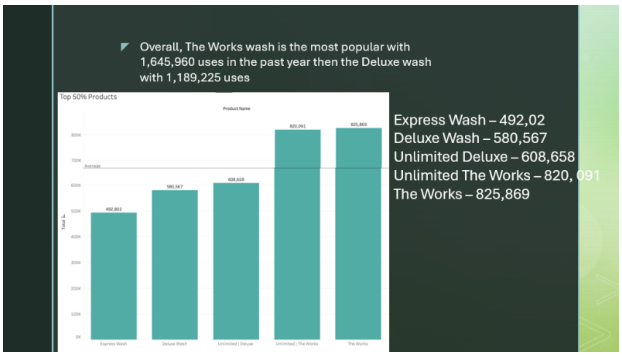
	Presentation					**Content**					
Team	***Content Preparedness (1-4)***	***Organization (1-4)***	***Visual Support (1-4)***	***Collaboration (1-4)***	***Presentation Delivery (1-4)***	***Presentation (1-4)***	***Quality of Data Analysis (1-4)***	***Summary of Data Analysis (1-4)***	**External Data (1-4)**	***Recommend (1-4)***	***Total (10-40)***
1											
2											
3											
4											
5											
6											

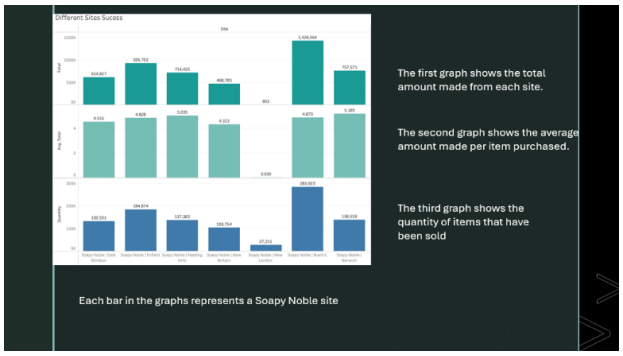
Comments

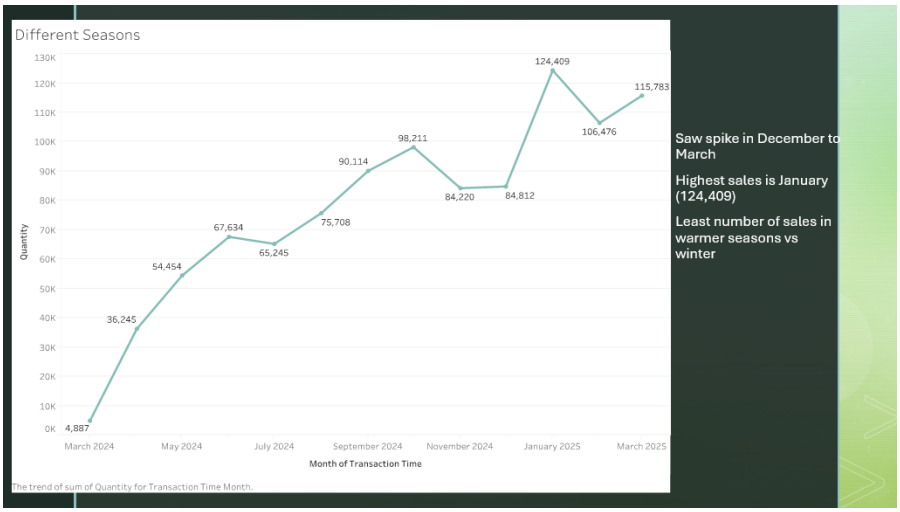
APPENDIX D
Sample Student Presentation

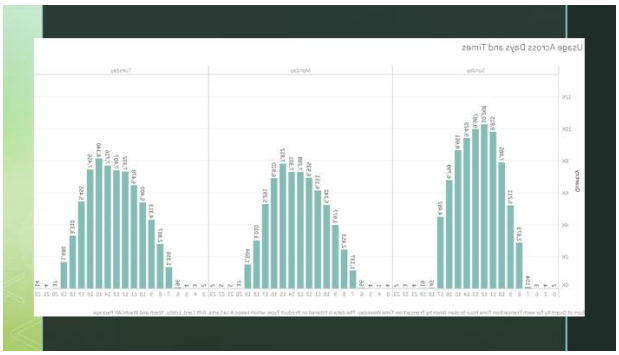


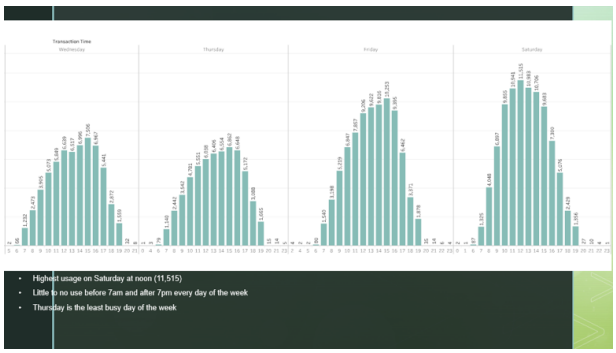


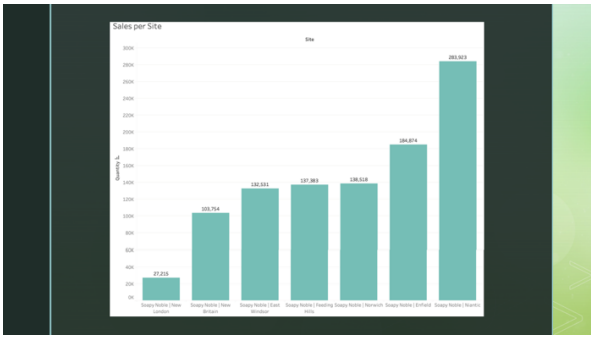


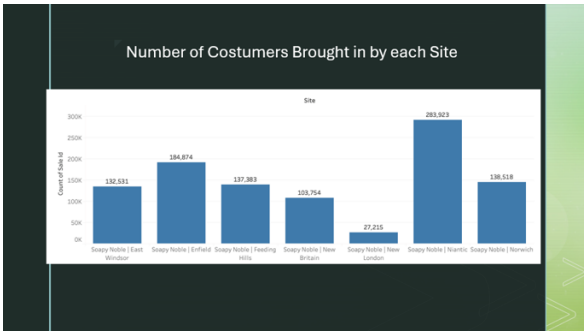


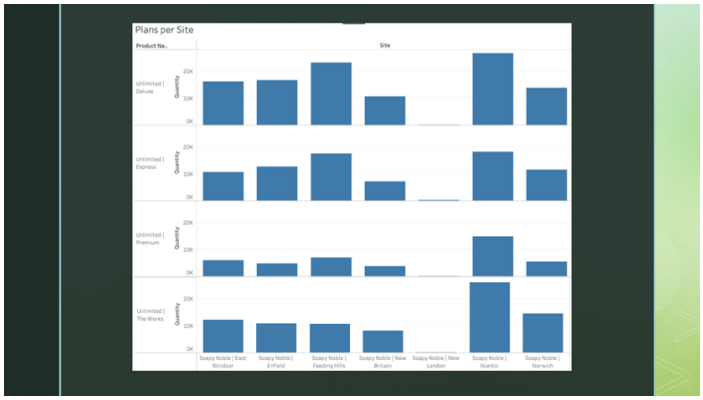


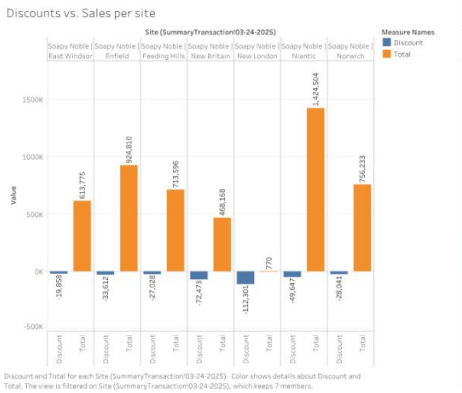




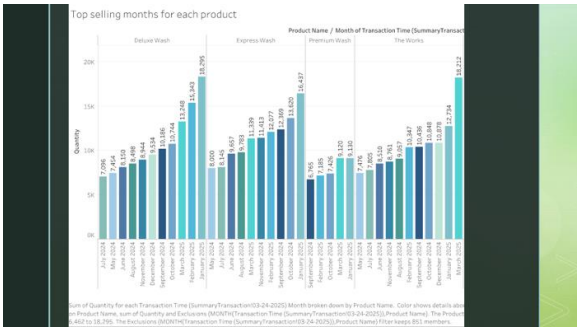


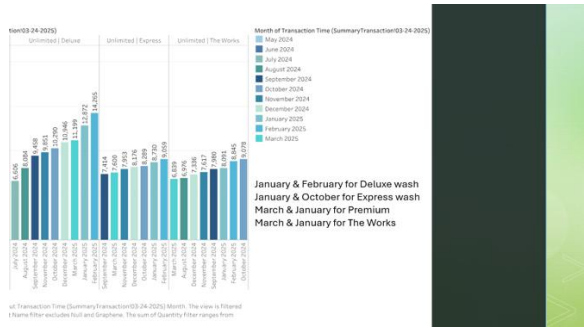


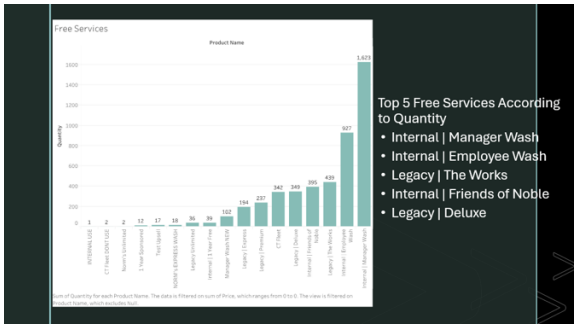


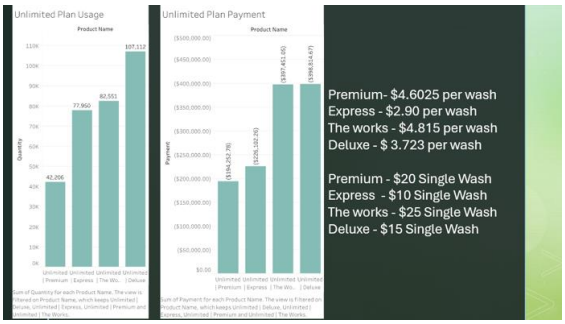


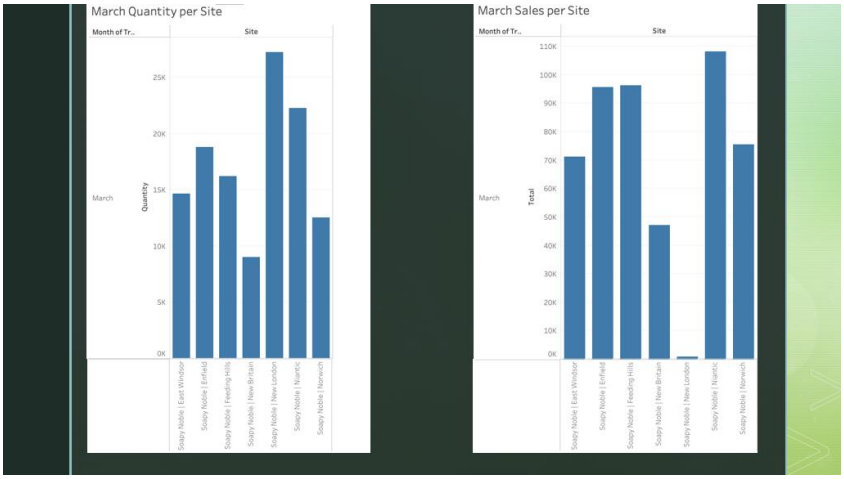
East Windsor - $593,917
Enfield - $891,198
Feeding Hills - $686,568
New Britain - $395,695
New London - ($111,531)
Niantic - $1,374,857
Norwich - $728,192

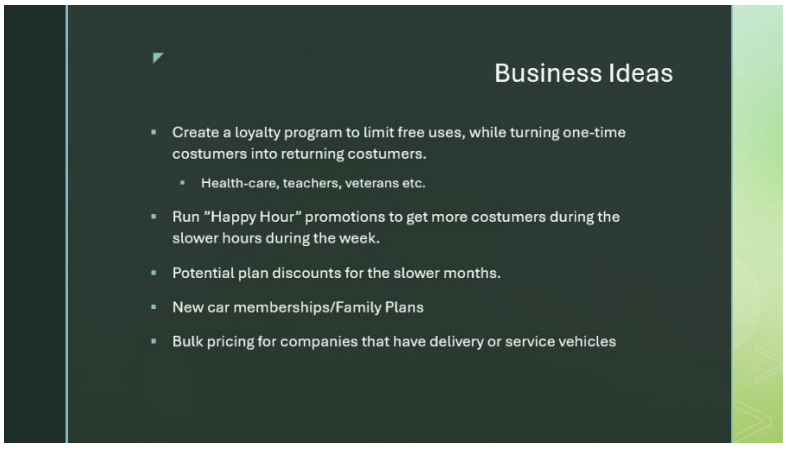

Top selling months for each product


January & February for Deluxe wash
January & October for Express wash
March & January for Premium
March & January for The Works


Free Services
Top 5 Free Services According to Quantity
• Internal | Manager Wash
• Internal | Employee Wash
• Legacy | The Works
• Internal | Friends of Noble
• Legacy | Deluxe


Unlimited Plan Usage
Unlimited Plan Payment
Premium- $4.6025 per wash
Express - $2.90 per wash
The works - $4.815 per wash
Deluxe - $ 3.723 per wash
Premium - $20 Single Wash
Express - $10 Single Wash
The works - $25 Single Wash
Deluxe - $15 Single Wash


March Quantity per Site
March Sales per Site


Business Ideas
Create a loyalty program to limit free uses, while turning one-time costumers into returning costumers.
Health-care, teachers, veterans etc.
Run "Happy Hour" promotions to get more costumers during the slower hours during the week.
Potential plan discounts for the slower months.
New car memberships/Family Plans
Bulk pricing for companies that have delivery or service vehicles

APPENDIX E
Prior ISEDJ Cases

Date	Article Title	Skill 1	Skill 2	Skill 3	Skill 4	Skill 5
25-Nov	Teaching Case: Kibbles & Bytes: Developing a Database for an Animal Shelter Silent Auction	Process Design	Swimlane Diagrams	Database Design		
25-Sep	Teaching Case: Countering the "Plagiarism Slot Machine": Protecting Creators and Businesses from AI Copyright Infringement	Screen Scraping	Data Pools	Metadata	AI Copyright Infringement	AI Training
25-Jul	Teaching Case: Leveraging Topic Modeling to Predict and Prevent Employee Attrition	Turnover	Latent Dirichlet Allocation	Human Resources	Retention	RapidMiner
25-Jul	Teaching Case: Online Maps and Route-Finding – Huge Success, With Some Nagging Problems ...	Online Maps	Route-finding	Route optimization		
25-May	Teaching Case: Agile Learning in Action: Fostering Students' Agile Mindsets and Experience with a Classroom Client Project	Agile	Active Learning	Collaboration		
25-Jan	Teaching Case: A Small Accounting Firm Must Meet the Challenge Posed by Artificial Intelligence	Consulting	Artificial intelligence	ChatGPT	Auditing	Accounting
25-Jan	Teaching Case: Cleaning Out the Basement: Designing & Developing a Database to Support an Online Side Hustle Case	Database design	Process design	Swimlane diagrams	Multidisciplinary Project	
24-Nov	Teaching Case: The Southwest Airlines Winter Meltdown - Case studies on risk, technical debt, operations, passengers, regulators, revenue, and brand	Supply Chain	Airline Industry	Risk Management	Scalability	Technical Debt

24-Sep	Teaching Case: A Data Analytics Module Introducing Principles of Social Enterprise and Humanistic Management	Data Analytics	Humanistic Management	Human Dignity	Analytics for Social Good	Data Visualization
24-Sep	Teaching Case: Generative AI in practice: A Teaching Case in the Introduction to MIS class	Generative AI	ChatGPT	Future of work	Prompt engineering	Business process
24-Jul	Teaching Case: How Popular is Your Name? Finding the Popularity of US Names Using Big Data Visualization	Big Data	Visualization	BigQuery	Tableau	
24-Jul	Teaching Case: Teaching Data Literacy Using Titanic Survival Factors	analytics	data literacy	Tableau	Python	Pandas
24-May	Teaching Case: The Agile Student Practice Project: Simulating an Agile Project in the Classroom for a Real-World Experience	Agile	Active Learning	Collaboration		
23-Nov	Teaching Case: Design Thinking: Facilitating Consumer Access to Community Services	Design Thinking	Internet of Things	Systems Thinking		
23-Nov	Teaching Case: Creating a Clear Vision for Rural Healthcare: A Data Analysis Exercise	Big Data Analytics	Healthcare			
23-Sep	Teaching Case: Robotic Process Automation Overdue Collections Case	Robotic Process Automation	Business Process Improvement	Business Process Reengineering		
23-Sep	Teaching Case: Health Care Management: Preventing Post-Surgical Falls after Hip or Knee Replacement Surgery through Predictive Analytics	Health Care Analytics	Data Science	Predictive Analytics	SAS Enterprise Miner	
23-Sep	Teaching Case: Tax Time: An Interdisciplinary Accounting Analytics Experiential Learning Activity	Accounting Analytics	Data Analytics	Forecasting	Decision Making	Tax Returns

23-Sep	Teaching Case: Using Supervised Machine Learning and CRISP-DM to Predict an Acquittal Verdict	Data Mining	Legal Analytics	CRISP-DM	Analytics Project	R
23-Jul	Teaching Case: Cybersecurity Assessment for a Manufacturing Company Using Risk Registers: A Teaching Case	Cybersecurity Controls	Risk Management	Manufacturing Cybersecurity		
23-Jul	Teaching Case: Yours, mine and ours: Risk assignments, management, and tradeoffs on the road to driverless vehicles	Autonomous Vehicles	Technology Rollout	Risk Management		
23-May	Teaching Case: A Registration System for a Citywide Service Project: A System Design & Development Case	Database Design	Process Design	Swimlane Diagrams		
23-May	Teaching Case: Alexa, Help Me Learn About the Internet of Things!	Internet of Things	Amazon Echo	Automation	Digital Literacy	Active Learning
22-Jun	Bracketology: Predicting Winners from Music March Madness	Python	Data Science	Data Analytics	APIs	Hit Song Science
22-Jun	An Experiential Learning Project using Sentiment Analysis of Twitter Posts	Experiential Learning	Analytics	Sentiment Analysis	Twitter	
22-Jun	Interacting with Bloomberg Terminal from an Information Technology Perspective	Bloomberg Terminal	Digital Literacy	Career Skills	Business Education	
22-Jun	An IT Start-Up meets a Conglomerate - the Integration Challenge	IT Strategy	Change Management	Merger and Acquisition	Software as a Service	Integration
22-Jun	Here We Grow Again! An Expansion for Mark’s Doggy Day Care: A Database Design and Development Case	Process Modeling	Systems Analysis	Database Design		
22-Jun	100 Million Doses in 100 Days: Analyzing the COVID-19 Vaccination Supply Chain	Data Analytics	Visual Analytics	Supply Chain Management	Experiential Learning	

21-Feb	Viral Scalability - Coping with Sudden Demand Swings	Scalability	Coronavirus	Cybersecurity		
21-Feb	Can you Predict the Money Laundering Cases?	Anti-Money Laundering	Business Analytics	Predictive Analytics	SAS Enterprise Miner	
21-Feb	GlobePort faces a Knowledge Gap in its Business Process Outsourcing	Knowledge Management	Process Management	Business Process Outsourcing	Collaboration Systems	
21-Feb	TheatreWorks of Southern Indiana: A Database Design Case	systems analysis and design data model	Data Flow Diagram	Data Dictionary		
20-Apr	Styles by Ashley: A System Design and Development Case	Process Design	Swimlane Diagrams	Database Design	Request for Proposal	
20-Apr	Ethics and Data Manipulation	Ethics	Data Analysis	Research	Decision Making	
20-Apr	Software Business Models	Teamwork	Comm	Info. process	Critical Thinking	Problem Solving
20-Apr	Broadband Connectivity In "Flyover Country"	Computer Info Systems	MIS	Legislation	Ethics	Net Neutrality
20-Apr	Ethical Coding: Privacy, Ethics & Law in Computing	Ethics	Data Security	Compliance with Industry Standards		
20-Apr	A Taste of Microsoft Data Analytics in Introductory MIS Curriculum to Encourage Analytics Skills and Knowledge	Big Data	Analytics	Data Visualization		

Article Title	Level	Data Supplied?	Data Format	Real World?	Link
Teaching Case: Kibbles & Bytes: Developing a Database for an Animal Shelter Silent Auction	Upper/Grad	No	Screenshots	Yes	https://isedj.org/2025-23/n6/ISEDJv23n6p53.pdf
Teaching Case: Countering the "Plagiarism Slot Machine": Protecting Creators and Businesses from AI Copyright Infringement	Upper	No	Not Available	Yes	https://isedj.org/2025-23/n5/ISEDJv23n5p53.pdf
Teaching Case: Leveraging Topic Modeling to Predict and Prevent Employee Attrition	Upper	No	Screenshots	Yes	https://isedj.org/2025-23/n4/ISEDJv23n4p69.pdf
Teaching Case: Online Maps and Route-Finding – Huge Success, With Some Nagging Problems ...	Grad	Yes	URL Link	Yes	https://isedj.org/2025-23/n4/ISEDJv23n4p22.pdf
Teaching Case: Agile Learning in Action: Fostering Students' Agile Mindsets and Experience with a Classroom Client Project	Upper	No	Not Available	Yes	https://isedj.org/2025-23/n3/ISEDJv23n3p41.pdf
Teaching Case: A Small Accounting Firm Must Meet the Challenge Posed by Artificial Intelligence	Upper	No	Not Available	Yes	https://isedj.org/2025-23/n1/ISEDJv23n1p46.pdf
Teaching Case: Cleaning Out the Basement: Designing & Developing a Database to Support an Online Side Hustle Case	Upper	No	Metrics discussed, but no data given	Yes	https://isedj.org/2025-23/n1/ISEDJv23n1p23.pdf

Teaching Case: The Southwest Airlines Winter Meltdown - Case studies on risk, technical debt, operations, passengers, regulators, revenue, and brand	Upper	No	Not Available	Yes	https://isedj.org/2024-22/n5/ISEDJv22n5p59.pdf
Teaching Case: A Data Analytics Module Introducing Principles of Social Enterprise and Humanistic Management	Intro	No	Data mentioned, but no link	Yes	https://isedj.org/2024-22/n4/ISEDJv22n4p62.pdf
Teaching Case: Generative AI in practice: A Teaching Case in the Introduction to MIS class	Intro	No	Not Available	Yes	https://isedj.org/2024-22/n4/ISEDJv22n4p29.pdf
Teaching Case: How Popular is Your Name? Finding the Popularity of US Names Using Big Data Visualization	Intro	No	Data mentioned, but no link	Yes	https://isedj.org/2024-22/n3/ISEDJv22n3p61.pdf
Teaching Case: Teaching Data Literacy Using Titanic Survival Factors	Intro	Yes	URL Link	Yes	https://isedj.org/2024-22/n3/ISEDJv22n3p25.pdf
Teaching Case: The Agile Student Practice Project: Simulating an Agile Project in the Classroom for a Real-World Experience	Intro	No	Screenshots	Yes	https://isedj.org/2024-22/n2/ISEDJv22n2p70.pdf
Teaching Case: Design Thinking: Facilitating Consumer Access to Community Services	Upper	No	Not Available	Yes	https://isedj.org/2023-21/n5/ISEDJv21n5p60.pdf

Teaching Case: Creating a Clear Vision for Rural Healthcare: A Data Analysis Exercise	Upper/Grad	Yes	Google Sheet	Yes	https://isedj.org/2023-21/n5/ISEDJv21n5p12.pdf
Teaching Case: Robotic Process Automation Overdue Collections Case	Upper	No	Screenshots	Yes	https://www.isedj.org/2023-21/n4/ISEDJv21n4p53.html
Teaching Case: Health Care Management: Preventing Post-Surgical Falls after Hip or Knee Replacement Surgery through Predictive Analytics	Intro	No	Screenshots	Yes	https://isedj.org/2023-21/n4/ISEDJv21n4p46.pdf
Teaching Case: Tax Time: An Interdisciplinary Accounting Analytics Experiential Learning Activity	Upper	Yes	URL Link	Yes	https://isedj.org/2023-21/n4/ISEDJv21n4p37.pdf
Teaching Case: Using Supervised Machine Learning and CRISP-DM to Predict an Acquittal Verdict	Upper	Yes	URL Link	Yes	https://isedj.org/2023-21/n4/ISEDJv21n4p23.pdf
Teaching Case: Cybersecurity Assessment for a Manufacturing Company Using Risk Registers: A Teaching Case	Upper	No	Not Available	Yes	https://isedj.org/2023-21/n3/ISEDJv21n3p62.pdf
Teaching Case: Yours, mine and ours: Risk assignments, management, and tradeoffs on the road to driverless vehicles	Upper	Yes	URL Link	Yes	https://isedj.org/2023-21/n3/ISEDJv21n3p50.pdf

Teaching Case: A Registration System for a Citywide Service Project: A System Design & Development Case	Upper/Grad	No	Screenshots	No	https://isedj.org/2023-21/n2/ISEDJv21n2p82.pdf
Teaching Case: Alexa, Help Me Learn About the Internet of Things!	Intro	No	Not Available	Yes	https://isedj.org/2023-21/n2/ISEDJv21n2p69.pdf
Bracketology: Predicting Winners from Music March Madness	Upper	No	Coding, heatmap, brackets	Yes	https://isedj.org/2022-20/n3/ISEDJv20n3p44.pdf
An Experiential Learning Project using Sentiment Analysis of Twitter Posts	Intro	No	Screentshots	Yes	https://isedj.org/2022-20/n3/ISEDJv20n3p36.pdf
Interacting with Bloomberg Terminal from an Information Technology Perspective	Upper	No	Screenshots and Readings	Yes	https://isedj.org/2022-20/n3/ISEDJv20n3p27.pdf
An IT Start-Up meets a Conglomerate - the Integration Challenge	Grad	No	Not Available	Yes	https://isedj.org/2022-20/n3/ISEDJv20n3p19.pdf
Here We Grow Again! An Expansion for Mark's Doggy Day Care: A Database Design and Development Case	Upper	No	Screenshots	No	https://isedj.org/2022-20/n3/ISEDJv20n3p12.pdf
100 Million Doses in 100 Days: Analyzing the COVID-19 Vaccination Supply Chain	Upper	Yes	URL Link	Yes	https://isedj.org/2022-20/n3/ISEDJv20n3p4.pdf
Viral Scalability - Coping with Sudden Demand Swings	Upper	No	Diagrams	Yes	
Can you Predict the Money Laundering Cases?	Grad	No	Data mentioned, but no link	Yes	https://isedj.org/2021-19/n1/ISEDJv19n1p16.pdf

GlobePort faces a Knowledge Gap in its Business Process Outsourcing	Upper/Grad	No	Screenshots	Yes	https://isedj.org/2021-19/n1/ISEDJv19n1p9.pdf
TheatreWorks of Southern Indiana: A Database Design Case	Upper	No	Screenshots	Yes	https://isedj.org/2021-19/n1/ISEDJv19n1p4.pdf
Styles by Ashley: A System Design and Development Case	Grad	Yes	Screenshots	No	https://isedj.org/2020-18/n2/ISEDJv18n2p14.pdf
Ethics and Data Manipulation	Upper	No	Not Available	No	https://isedj.org/2020-18/n2/ISEDJv18n2p4.pdf
Software Business Models	Upper	No	Q&A	No	https://isedj.org/2020-18/n2/ISEDJv18n2p22.pdf
Broadband Connectivity In "Flyover Country"	Intro	No	Screenshots	Yes	https://isedj.org/2020-18/n2/ISEDJv18n2p41.pdf
Ethical Coding: Privacy, Ethics & Law in Computing	Upper/Grad	No	Screenshots	Yes	https://isedj.org/2020-18/n2/ISEDJv18n2p50.pdf
A Taste of Microsoft Data Analytics in Introductory MIS Curriculum to Encourage Analytics Skills and Knowledge	Intro	Yes	URL Link	Yes	https://isedj.org/2020-18/n2/ISEDJv18n2p58.pdf