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Teaching Case

Operational Analytics in Excel: A Transaction-Level Car Wash Case for Introductory Data Literacy

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Hook

"I know our washes are busy, but are we actually making money? And which location is really pulling its weight?" Matthew Auger, Director of Operations at Soapy Noble Express Car Wash, leaned back from his laptop and stared at a dashboard full of charts he did not fully trust. Since the company rolled out a new point-of-sale system across its eight New England locations, Soapy Noble had more detail than ever, including timestamps, product mix, payment types, and transaction totals for every wash sold.

The problem was turning all of that activity into decisions. Some sites looked consistently strong, while others surged on weekends and then went quiet. The monthly unlimited plan was growing, but Matthew could not tell whether it was boosting revenue or cannibalizing single-wash sales. He also needed to know when demand peaked, whether staffing patterns matched actual traffic, and which levers, such as pricing, promotions, hours, or service mix, were most likely to move results. With transaction data flowing in across eight locations and no shortage of operational questions, Matthew brought in an external consulting team and asked for clear, data-backed recommendations he could act on quickly.

Abstract

This teaching case introduces introductory level students to data literacy through an applied operational analytics project based on a regional express car wash business. Students assume the role of an external consulting team hired by Soapy Noble Express Car Wash, a fast-growing chain operating eight locations in New England, to analyze transaction level point of sale data and develop actionable recommendations for management. Using approximately one year of transaction records at scale, students apply Excel based techniques such as data cleaning, descriptive statistics, pivot tables, and visualization to identify patterns in customer demand, service mix, location performance, and monthly unlimited plan usage. To extend analysis beyond the internal dataset, the case encourages students to locate and integrate relevant external sources, such as weather or demographic data, and to explain how these sources inform interpretation and recommendations. The case is designed for first year courses in data literacy, business analytics, or introductory CIS and includes team-based deliverables appropriate for nontechnical decision makers, including an analysis workbook and a concise executive memo and presentation.

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

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Operational Analytics in Excel: A Transaction-Level Car Wash Case for Introductory Data Literacy

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; Mentzer et al., 2024; Wolff et al., 2016). 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 pedagogical bridge between theory and applied practice (Bell, 2010; Blumenfeld et al., 1991).

PBL immerses students in sustained inquiry and collaborative problem-solving, encouraging deeper cognitive engagement and fostering both technical and professional skills. Research has shown that PBL can increase student motivation and improve transfer of learning across contexts (Barron & Darling-Hammond, 2008; Thomas, 2000), benefits that are particularly relevant in data-focused education where students must navigate ambiguity, clean and interpret data, and develop actionable insights.

This teaching case is designed as a project-based learning experience for first-year undergraduate students developing foundational data analysis skills in an introductory Data Literacy context. 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 optional 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.

Implemented in a required first-year undergraduate Data Literacy course, this case supports AACSB-relevant assurance-of-learning documentation by generating assessable student artifacts (Excel analysis, memo, and presentation) and by evaluating them with a common scoring rubric. The judges used the rubric (see Appendix C) to score each team and select the winners of the case competition; instructors may also use rubric dimensions as direct evidence of data literacy and analytic communication outcomes for AoL reporting.

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

Instructors in introductory CIS, MIS, and analytics courses often seek datasets that are authentic, engaging, and appropriately scoped for novice learners. Public repositories such as Kaggle and data.gov can be useful starting points, but they frequently present tradeoffs for introductory teaching. Many Kaggle datasets and competitions presume advanced modeling skills beyond the first-year level, while some government datasets can be either too narrow or insufficiently engaging to sustain a multi-week, team-based project.

Across the 39 cases, 23% (n = 9) provided data for student use. Regarding intended audience, 25.6% (n = 10) were aimed at introductory courses, 51.3% (n = 20) at upper-level courses, 10.2% (n = 4) at graduate courses, and 12.8% (n = 5) at both upper-level and graduate courses (Figure 2).



This case is designed to address these gaps by providing: (1) a novel, real-world dataset; (2) an introductory-level project suitable for first-year students in data literacy or introductory MIS/analytics; (3) data at a scale that is large enough to require meaningful summarization and support the discovery of non-obvious patterns; and (4) a business context that is easily relatable to students.



- ### 3. COMPANY BACKGROUND

In early 2024, Soapy Noble implemented a new point-of-sale system that captures detailed, transaction-level information, including timestamps, location identifiers, products purchased, payment types, and revenue amounts. With this new visibility into operations and sales, leadership is seeking to use the data to support decisions related to pricing, staffing,

marketing, operational improvements, and future growth.

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 point-of-sale data. Management has asked the team to evaluate:

- Which locations are overperforming or underperforming, and why
- Patterns in demand by time of day and day of week
- Seasonal patterns in usage
- The financial implications of the monthly unlimited plan
- Service mix and pricing effectiveness
- Broader market factors that may influence performance (for example, demographics and weather)

Students receive approximately one year of transaction-level data (about 1 million rows) and are encouraged to enhance their analysis with one or more external datasets (for example, U.S. Census data or NOAA weather data).

Analysis Expectations

In the analysis phase, teams translate raw transaction records into management-ready insights and recommendations. The goal is not to build a perfect model, but to use structured Excel analysis to identify operational patterns, test plausible explanations, and quantify the business implications of those patterns. Successful teams make their work transparent by labeling assumptions, documenting steps, and presenting summaries that a nontechnical stakeholder could follow.

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 management-ready findings and recommendations for the memo and presentation.

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

Client-Facing Deliverables

Deliverables are intentionally designed to mirror what an external consulting team would provide

to an operations leader. Each artifact serves a distinct purpose: the workbook documents the analytical trail, the memo communicates the headline findings concisely, and the slide deck supports a decision-focused presentation. Together, these deliverables emphasize clarity, visual communication, and actionable recommendations rather than technical jargon.

Each team must submit:

- An Excel workbook with labeled analysis and visuals
- A management-facing slide deck
- A one-page executive memo
- A list of 2–3 strategic recommendations backed by data

Case Competition Format

We implemented this case as a competition across five sections of Data Literacy, a required first-year course that builds foundational Excel, Word, and PowerPoint skills. Students self-selected into teams of two to five and had approximately three to four weeks to complete the analysis.

During the first week, instructors distributed the dataset through the LMS, provided time for students to review the data structure, and held a Q&A session to clarify variable definitions and expectations. Instructors were asked to support student-led analysis plans and execution, while avoiding injecting their own conclusions into teamwork.

In the preliminary round, each course section selected a finalist team to represent the section in the final presentation round. Teams typically spent Weeks 1 through 3 on exploration, cleaning, external data integration, figure development, and executive summary preparation, with section presentations occurring during Week 4. Sections used peer feedback, instructor notes, or the shared rubric (Appendix C) to support selection of a section winner.

Before the final event, finalist teams met briefly with instructors to confirm presentation format and timing. Finalists then delivered a 15-minute presentation to Soapy Noble's management team and other judges, who used the supplied scoring rubric to select the overall winners.

5. INSTRUCTOR AND STUDENT FEEDBACK

Faculty Reaction

Faculty observations were generally positive, with several predictable challenges that are common

in introductory, open-ended analytics work. After the project launch, some students expressed low confidence in the quality of the work they could produce. Others felt overwhelmed by the scale of the dataset (approximately 1 million rows) and the number of variables available, and some teams struggled to determine where to begin. Students were also understandably anxious about presenting their findings to Soapy Noble's management team.

To support students through these early barriers without reducing the authenticity of the task, instructors required each team to create a brief analysis plan before building charts or drafting recommendations. Teams articulated the questions they intended to answer, identified the variables they would use, and wrote down what they expected to find. This planning step increased confidence and helped teams establish a workflow. Instructors implementing this case should monitor student confidence closely and provide structure early, as the assignment is intellectually demanding.

Faculty also reported that the local nature of the client increased student engagement. Several students were familiar with the business, and some had been customers. This strengthened the perceived relevance of the work and helped students connect data analysis to real operational decisions.

Student Feedback

Student feedback was largely positive. Many students described the project as engaging, useful, and more challenging than typical spreadsheet assignments. Several students highlighted the difficulty of translating analysis into a clear narrative and selecting visuals that directly address the business questions. This is a desired outcome of the case, since the ability to explain and defend analytical choices is central to data literacy.

How to AI-Proof this case

While no case can fully prevent the use of AI tools, instructors can design the assignment so that meaningful learning depends on student decision-making, documentation, and communication. Several approaches have worked well with this case:

1. Use constraints that require hands-on analysis. Because transaction-level datasets of this size are difficult to paste directly into typical chat tools, students still need to summarize, clean, and structure the data in Excel before they can ask useful AI-supported questions.

2. Require stakeholder-specific deliverables. Ask teams to tailor their messaging to different audiences (for example, operations leadership versus marketing). Generic, one-size-fits-all responses tend to fail when context and tradeoffs matter.
3. Require external data selection and justification. Do not provide the external datasets. Instead, require teams to find, justify, and cite their own sources (for example, weather, demographics, local events) and explain how the added context changes interpretation.
4. Build in process checkpoints. Include interim submissions such as an analysis plan, draft visuals, and a walkthrough of workbook logic. Use brief in-class progress reviews to surface whether teams understand their own work.
5. Collect the workbook as evidence. Require students to submit the Excel file with formulas, pivot tables, and labeled steps so the analytical trail is transparent.
6. Use live presentations and questioning. Ask teams to defend choices and explain tradeoffs, such as why they selected a specific metric, chart type, filter, or segmentation approach, and what alternative explanations they considered.

6. CONCLUSIONS

This teaching case demonstrates how transaction-level point-of-sale data can be used to build foundational data literacy skills through an applied, decision-focused project. By positioning students as an external consulting team for a regional express car wash chain, the case creates an authentic context in which learners must move beyond mechanical spreadsheet steps and instead translate data into operational insight and actionable recommendations.

The case is intentionally designed for introductory learners and can be completed using Excel as the primary analysis tool. Students practice core competencies such as data cleaning, descriptive statistics, pivot tables, and visualization, while also developing the communication skills required to explain methods, interpret results, and justify recommendations for a nontechnical audience. The option to integrate external datasets, such as weather or demographic information, further reinforces the idea that business analysis is strengthened when internal performance data is interpreted within a broader context.

Instructor experience suggests that the

combination of open-ended questions and a large dataset can initially feel challenging for first-year students. However, with light structure early in the project, such as an analysis plan, interim checkpoints, and emphasis on documentation in the workbook, teams can produce high-quality, defensible work. These implementation features also support academic integrity by making student reasoning visible through process artifacts and live explanation rather than relying solely on a final answer.

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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 8 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)

- 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 theme/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 effectively; 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, maintain eye contact 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

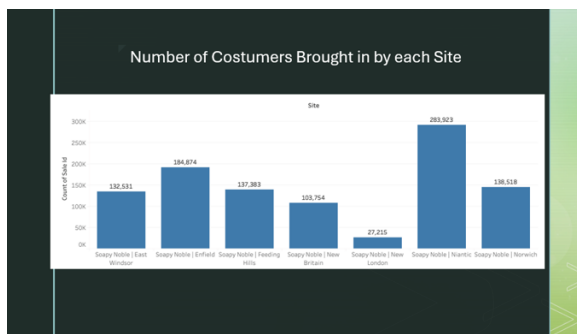
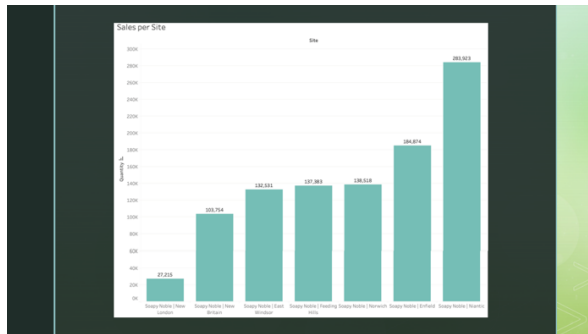
Evaluator Name: _____

	Presentation					Content					
Team	<i>Content Preparedness (1-4)</i>	<i>Organization (1-4)</i>	<i>Visual Support (1-4)</i>	<i>Collaboration (1-4)</i>	<i>Presentation Delivery (1-4)</i>	<i>Presentation (1-4)</i>	<i>Quality of Data Analysis (1-4)</i>	<i>Summary of Data Analysis (1-4)</i>	<i>External Data (1-4)</i>	<i>Recommend (1-4)</i>	<i>Total (10- 40)</i>
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





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