BERKE GUZELSU

ASSISTANT PROFESSOR OF BUSINESS MANAGEMENT

emre.guzelsu@gmail.com
609-933-7459
Waltham, MA
https://www.linkedin.com/in/emre-guzelsu/

Skills

DATA ANALYSIS

Python
SQL
MATLAB
Octave
Bloomberg
DBC Muni Bonds
R
What's Best! Optimization
STATA
Tableau
VBA

Education

Springboard Data Science Career Track — 2022
6-month intensive course in data science, machine learning, Python and SQL.

Boston University - Questrom School of Business
PhD Business Management - Operations Management 2020
Empirical & data analytics of startups | Operations strategy & operations management | Project & product management (e.g., agile, lean, etc.) | Business Analytics and insights

Boston University - College of Engineering
MEng Systems Engineering 2014
Probability & statistical analyses | Applied mathematical modeling

Franklin & Marshall College
BA Economics / Business Management 2007
Public policy & finance | Business management | Econometrics and federal economic policy

Employment

Springfield College — Springfield, MA
Assistant Professor — July 2020 to Current
• Teaching modern financial & technical skills like advanced spreadsheet development, data visualization, data analytics, and data science by developing our academic content
• Courses taught include: Nonprofit financial management, operations management, public and private company financial management, entrepreneurship, business ethics, macroeconomics, microeconomics, data analytics, and managerial economics
• Expanding the college's student pool by creating new online courses while also teaching a 4/4 load
• Managing the administration's goal of achieving AACSB accreditation by measuring key performance indicators and providing improvement recommendations
• Researching the transition process of new ventures as they go from startups to established companies by quantitatively and qualitatively analyzing empirical data

Pine Box Entertainment
Lead Game Designer / Co-Founder — 2017 to 2017
• Cofounded Pine Box Entertainment to revive Doomtown via a Kickstarter fundraiser where we raised approximately $170k to develop and release new content
• Managed four successful releases of content for Doomtown as lead designer while directing and collaborating with our international rules team and playtest teams
• Implemented continuous improvement to Doomtown products by analyzing customer and game data gathered from various platforms including Discord and the Doomtown Card Database
• Created our playtest information management system via Google Sheets and Discord to efficiently collect and calculate playtest statistics while providing feedback and periodic updates to all relevant parties

High Street Consulting Group
Financial Analyst — 2016 to 2017
• Developed feasibility analyses of different highway expansion options by building a comprehensive debt capacity model in Excel that integrated the TIFIA program, US municipal bonds, and projected highway costs & revenues
• Analyzed the cost of different debt financing structures by analyzing market trends and understanding any extra requirements necessary to meet stakeholder needs
• Advised the primary client in conjunction with High Street by explicating the TIFIA program and providing information on municipal debt financing strategies

Public Financial Management — Philadelphia, PA
Consultant — July 2007 to July 2011
• Identified solutions to the unique financial and strategic problems facing municipal authorities by building custom-tailored analytical models in Excel that were client-facing and could summarize information quickly and visually
• Guided municipal debt issuers through the debt issuance process by conducting rigorous analyses of debt structuring options, spread analyses, intra-day trading yields, comparable issuers, and legal documents
• Provided support to our financial advisory teams by conducting specialized analyses regarding current & advanced refunding opportunities and option-adjusted yield analyses to determine present value savings
• Built ad hoc analysis models for special projects when standard models did not meet project parameters

Projects

Iowa I-80 Expansion — 2016 to 2017
Project Description: The Iowa Department of Transportation wanted to use the federal government's option to toll federal interstates to raise funds and finance state road repairs and expansions. My specific role was to analyze engineering estimates for various highway expansion proposals and determine different financing options to meet the costs of the proposal.

Tasks & Accomplishments
• Read and analyzed the literature regarding TIFIA loans and the federal government's highway toll system program regarding requirements, obligations, and milestones
• Created a financial feasibility model in Excel that could integrate various forms of financing including TIFIA loans, municipal fixed rate bonds, and municipal CABs
• Evaluated the price of various expansion proposals provided by engineers including a 10-lane highway model, 10-lane highway model with four dedicated truck lanes, and a 6-lane highway model
• Calculated the total costs of each highway model and matched each model with its optimal form of financing
• Compiled reports that included total cost, total financing costs, and visualizations of debt service and payments to include in the final report that was given to the Iowa Department of Transportation

Solera Self Cleaning Solar Panels — 2013 to 2015
Project Description: BU wanted to evaluate the financial feasibility of a new technology being developed that would help clean solar panels and mirrors via electrostatic fields. My specific role was to convert engineering data from the research project into financial costs from the ground up and combine it with macro financial information provided by Solera regarding building a CSP solar plant to evaluate financial feasibility and different costing options.

Tasks & Accomplishments
• Converted engineering specs for self-cleaning solar panels into financial costs by analyzing the manufacturing process, materials required, scalability concerns, and capital investments
• Coordinated with the research team to analyze solar panel efficacy and the financial implications for a CSP plant
• Analyzed financial information from Solera to estimate the cost of a CSP solar plant that included self-cleaning solar panels and the associated benefits
• Built an integrated Excel model that aggregated data from various sources into an analysis package that provided a dashboard of instantaneous feedback to guide team decisions
• Presented the financial implications at a conference and published a conference proceedings paper on the concept of the levelized costing of energy

Weighted Student Funding Model — 2010 to 2011
Project Description: The School District of Philadelphia wanted to implement a Weighted Student Funding model where funding was allocated on a per student basis that in summation became a school's budget. My primary task was to create an Excel model with an integrated dashboard that could provide instant feedback regarding different weighting schemes.

Tasks & Accomplishments
• Dissected and organized school-wide district data to figure out "baseline" weights for students by working with PFM's strategic consulting team
• Developed a fund-allocation model that integrated legal requirements and provided all categories necessary to meet stakeholder needs
• Created an Excel model with a complete dashboard visualization that allowed stakeholders to quickly consider different weighting schemes and the resulting school funding that would occur to evaluate feasibility and compliance with district guidelines

Pennsylvania Turnpike Act 44 Financing Model — 2008 to 2009
Project Description: PFM was hired by the Commonwealth of Pennsylvania to analyze the financial feasibility of using revenues generated from the PA Turnpike to help finance infrastructure repairs across the state. This project also called for PA to use the federal government's option to toll federal highways.

Tasks & Accomplishments
• Translated both Act 44's legal requirements and the federal highway's toll program requirements into financing parameters and helped identified which projects could be funded via revenues generated
• Compiled historical PA Turnpike revenue information and estimated I-80 revenues to create a financing structure that could support a 50-year infrastructure plan
• Built the PA Turnpike and I-80 revenue model which automatically calculated financing requirements based on revenue assumptions and provided estimates on expected costs regarding setting up tolling equipment

Activities

XR Terra Foundations & Game Developer Certificate for Unity VR Development

Level III Candidate in the Chartered Financial Analyst (CFA) Program

Google (Coursera) Data Analytics Certificate

Instructor for Infosys Business Analyst Training Program