ELIZABETH FRANK

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OBJECTIVE

Master of Science in Applied Data Science graduate student with expertise in Python, R, and SQL. Skilled in analyzing large datasets, developing machine learning models, and creating dashboards that improve data accessibility. Seeking an opportunity in data analytics, machine learning, or AI where data-driven insights support business strategy and innovation.

EDUCATION

Master of Science in Applied Data Science,
Syracuse University | *Expected March 2026, 4.0 GPA*
Applied Data Science Program: Leveraging AI for Effective Decision-Making | MIT Professional Education
Insect Pathology | Cornell University, Ithaca, New York
Bachelor of Science in Conservation,
Kent State University, Kent, Ohio

GRADUATE COURSE WORK

Machine Learning & Text Mining
Deep Learning & Natural Language Processing
Scripting for Data Analysis
Quantitative Reasoning in Data Science
Data Administration Concepts and Database Management
Business Analytics
Information Security & Cloud Management

PROJECTS

UN General Debate Economic Rhetoric Analysis | Syracuse University

*Applied **natural language processing** and **machine learning** to 20 years of UN General Debate speeches (2005–2024) to study the impact of **global economic shifts** on political rhetoric.*

- Preprocessed text with custom **Python (NLTK, regex)** applied **VADER sentiment analysis** to capture rhetorical patterns across 160+ countries
- Engineered economic regime labels from GDP growth rates to align speeches with macroeconomic context
- Trained **TF-IDF** + **Linear SVM models (GridSearchCV),** achieving stable macro-F1 scores of 0.67–0.69 despite class imbalance
- Visualized rhetorical shifts during **global shocks** (2008 financial crisis, 2014–16 geopolitical crisis, COVID-19) and identified cue words linked to downturn discourse

Student-Teacher Ratio Modeling | Syracuse University

*Developed **supervised and unsupervised models** to analyze staffing disparities across **100K+ U.S. public schools** using **NCES EDGE data**.*

- Engineered **socioeconomic features** such as wage competitiveness, poverty estimates, and lunch eligibility rates
- Applied **Random Forest regres**sion with **cross-validation** and **hyperparameter tuning**, revealing geography and economics as key predictors of student-teacher ratios
- Used **PCA**, **t-SNE**, and **HDBSCAN clustering** to uncover structural groupings aligned with locale, demonstrating data-driven insights into educational inequities

PROFESSIONAL EXPERIENCE

Assistant Office Manager & Finance/Procurement Lead
Vasile Elevator | 2025–Present
Oversee operations, financial reporting, and procurement strategy for an elevator design firm company.

- Implement purchasing and vendor management processes, reconciling stock against requests and automation of procurement workflows.
- Manage QuickBooks reporting, open PO audits, and budget analysis to generate leadership-ready financial dashboards and cash flow insights.
- Coordinate with external IT provider to oversee systems, troubleshoot integrations, and technology upgrades that improve workflow automation.
- Draft and implement HR policies, KPI tracking systems, and EOS processes to align cross-department operations with long-term growth goals.
- Partner with sales team by providing warm lead follow-up and public data pull, contributing to new client acquisition and visibility.

Onboarding Specialist and Data Science Consultant
NuLogic Business Solutions | 2024-2025
Specialized in healthcare agent onboarding and consulting for data-driven staffing solutions.

- Designed candidate data capture systems and applied Python- and SQL-based analytics to streamline high-volume onboarding workflows.
- Conducted predictive modeling of Annual Enrollment Period (AEP) outcomes, identifying drivers of placement success and attrition.
- Delivered insights to leadership of major clients (Humana, UnitedHealthcare, Kaiser Permanente, Aetna, Medicare), shaping recruitment programs for 2,000+ licensed agents during peak enrollment.

Senior Biological Science Technician
U.S. Department of Agriculture, Agricultural Research Service, Invasive Plant Research Laboratory | 2006-2021
Directed large-scale research projects on invasive plant management with emphasis on experimental design, statistical analysis, and publication.

- Applied data collection, cleaning, and statistical modeling to evaluate biological control programs, producing insights for federal permitting and peer-reviewed publications (10 co-authored works).
- Designed experiments and managed multi-year datasets, ensuring reproducibility, integrity, and actionable reporting to diverse stakeholders.
- Supervised and trained technical staff in data protocols, compliance, and safety within quarantine and field facilities.
- Coordinated budgets and purchasing for division operations while contributing to public outreach and stakeholder engagement.

TECHNICAL SKILLS

•Python (NumPy, Pandas, Scikit-Learn, Seaborn, Matplotlib, PyTorch, NetworkX, TensorFlow, Keras), R, SQL •
• AWS, Azure, Tableau, Google Analytics, Power BI, Access, Excel •
• SPSS, SAS, Sigma Plot • Microsoft, Mac OS•