Erik Hoxhaj

16 May place
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EDUCATION

Stevens Institute of Technology **Hoboken, NJ**
Bachelor of Science in Mathematics; Bachelor of Science in Computer Science *Class of 2028*

- Cumulative GPA: 3.803/4.0
- Relevant Coursework: Multivariable Calculus, Probability and Statistics, Linear Algebra, Discrete Math, Data Structures, Algorithms, Computer Architecture, Differential Equations

WORK EXPERIENCE

Stevens Institute of Technology **Hoboken, NJ**
Math Research Intern *Jun 2025 – Present*

- Worked with Escobedo analytical methods for coagulation equations and began applying them to Safronov-Dubovski coagulation models under faculty supervision, focusing on gelation phenomena and mass conservation properties
- Supported faculty advisor with literature review on coagulation-fragmentation models, contributing background research on moment estimates and decay rates for total mass

Velosaty **New York City, NY**
Software Engineer Intern *Feb 2025 – May 2025*

- Enhanced website performance and load by 12% through refactoring of the code base, improving load times and responsiveness
- Connected RESTful APIs with Firebase to streamline backend interactions and data access
- Developed and designed react components in collaboration with UI/UX, leveraging Git for streamlined version control, docker for testing, and Jira for collaboration

Projects

Data Processing Library | Link

- Developed and published a Python package on PyPI with automated data type detection, KNN imputation, outlier removal, and multiple scaling methods using type-safe enum architecture
- Implemented CI/CD pipeline with multi-platform testing, automated PyPI deployment, pre-commit hooks, and 85%+ test coverage across Python 3.9-3.13
- Built CLI tool supporting 8+ file formats with optional Polars/PyArrow optimizations and modular architecture for programmatic and command-line usage

Bitcoin Data Pipeline | Link

- Developed a java-based data pipeline using Selenium to web scrape real-time bitcoin data, store the data in a csv file, and upload to Kaggle using a python script
- Deployed the project to a Raspberry Pi 5 running Ubuntu Linux, using cron jobs to automate the data collection and upload process, updating the dataset every night
- Built the project using Maven for dependency management and packaged the project into a jar file for portability across platforms and ease of use

ADDITIONAL INFORMATION

Programming: Python, Java, Scheme

Libraries: NumPy, SciPy, Matplotlib, Seaborn, Selenium, Kaggle

Frameworks: StreamLit, React

Technologies: Git/GitHub, Linux

Organizations: Stevens Mathematical Club (president), Upsilon Pi Epsilon, MAA, COMAP