

# David A. Pogrebitskiy

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## EDUCATION

**Northeastern University**, *Khoury College of Computer Sciences*, Boston, MA **GPA: 3.97/4.00**  
**Candidate for Bachelor of Science in Data Science**, Mathematics Minor Expected May 2024  
*Relevant Coursework:* Neural Networks, Machine Learning 2, Data Visualization, Large-Scale Storage & Retrieval, Mathematics of Machine Learning, Linear Algebra, Multi-variable Calculus, Probability & Statistics

## TECHNICAL SKILLS

**Languages:** Python, C++, SQL, Java, HTML, JavaScript  
**Libraries/Frameworks:** pandas, NumPy, PyTorch, Scikit-learn, Tensorflow, Plotly, PySpark, D3.js  
**Databases:** MySQL, MongoDB, Elasticsearch, Airflow, Kafka, Redis, Neo4j, HDFS, Spark

## EXPERIENCE

**Automated Execution Analyst Co-op** Jul 2023 - Present  
TD Cowen / TD Securities *New York, NY*

- Utilized Python to create FIX Protocol message translators, enhancing in-house analytics capabilities and meeting client-specific requirements
- Developed a Plotly dashboard to enhance the interpretability of quantitative trading signals and facilitate analysis of order routing technology
- Produced monthly market reports for clients from intraday quote and trade data, employing Dremio and SQL for efficient data acquisition and analysis, ensuring timely and accurate distribution to clients

**Data Science Teaching Assistant** Jan 2022 - Jun 2023  
Khoury College of Computer Sciences *Boston, MA*

- Conducted weekly office hours, offering personalized guidance to students in data science concepts
- Provided constructive feedback on assignments, improving learning outcomes and overall student performance

**Data Engineering Intern** Jun 2022 - Aug 2022  
Space CAMP *Colorado Springs, CO*

- Designed and implemented data streams and current-state tables in Apache Kafka using KSQL to deliver reliable and accurate satellite and mission status updates to satellite operators
- Developed an API to transform stream output from Kafka into JSON format, enabling interaction between Python and Kafka for developers

## PROJECTS

**DaveML** | *C++, Linear Algebra, Python* Nov 2022

- Implemented ETL module and various regression techniques (linear, ridge, and logistic) using C++ and principles of Linear Algebra and Calculus, such as QR Factorization, Gradient Descent, and cost functions
- Enclosed functionality into a Python module using PyBind11 to enable users with easy experimentation

**Hemorrhage Classification with CNN** | *TensorFlow, Python, Scikit-learn* Oct 2022

- Utilized TensorFlow to design and implement Convolutional Neural Networks (CNNs) for the classification of brain hemorrhages in CT images, achieving a 70% accuracy rate

## ACTIVITIES

**Director of Technical Workshops** | *Disrupt: The FinTech Initiative* Sep 2022 - Apr 2023

- Developed and presented a comprehensive Python curriculum, covering topics from introductory programming to financial analysis and data manipulation using Pandas