

Michael Paglia

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EDUCATION

University at Albany

Master of Science in Computer Science

Albany, NY

Anticipated May 2025

University at Albany

Bachelor of Science in Computer Science

Albany, NY

Anticipated May 2024

- GPA: 3.82/4.0
- Member of Phi Beta Kappa

EXPERIENCE

National Science Foundation REU Fellow

Jan. 2024 – Present

The Research Foundation for SUNY

Albany, NY

- Supervised under the guidance of Dr. Petko Bogdanov in the Data Management and Mining Lab
- Implements and tests 10+ machine learning algorithms for temporal graph and multi-dictionary signal decomposition, achieving a fit of over 98% to datasets with 1 million+ points for data reconstruction
- Leverages rank models and coding optimizers to enhance the research utility and user experience for researchers
- Integrates custom graph and time-series dictionary generation to reduce data retrieval time by nearly 90%

STEM Tutor

June 2022 – Present

PAPER

Remote

- Coaches over 500 students per month on mathematics and computer science using question-based teaching method
- Offers bilingual (English and Spanish) support while working with up to 4 students concurrently

Founder and CEO

Nov. 2020 – Present

M.P. Mercantile, LLC

Troy, NY

- Founded a start-up e-commerce business hosted on 3 major online marketplaces with 1,000+ unique customers
- Achieves over six figures annually in gross sales revenue and 25% growth year-over-year

Mid-Scale Manufacturing Intern

May 2023 – Aug. 2023

Regeneron Pharmaceuticals, Inc.

Rensselaer, NY

- Developed and deployed a CRUD application and REST API used by IT team members, improving operational efficiency and saving 2 hours of manual effort each week
- Provided smart contract-based access management using Python, Flask, JavaScript, and Dremio Data Lake, achieving a 20% improvement in secure data access verification times across an organization of 4000+ employees
- Automated internally written regulatory report data to reduce department processing time by 75%

PROJECTS

PySpady | *Python, NumPy, TensorLy, Git* | <https://bit.ly/pyspady>

Sep. 2023 – Present

- In connection with Student Researcher position at University at Albany
- Python library leveraging state-of-the-art and sparse encoding algorithms to analyze spatial-temporal data
- Features data compression, missing value imputation, future value prediction, and autocompletion
- Machine learning determines the best combination of dictionaries, models, and optimizers for a given dataset

Operating System Simulator | *Java, Git* | <https://bit.ly/os-simulator>

Sep. 2023 – Nov. 2023

- Designed for training typical operating system capabilities without requiring a VM
- Features priority scheduling, processes, messages, paging, and virtual memory using the local JVM

Custom Language Interpreter | *Java, Git* | <https://bit.ly/custom-interpret>

Aug. 2022 – Nov. 2022

- Defines a functional programming language with pseudocode-like syntax to introduce people to coding
- Capable of lexical analysis, parsing, and semantic analysis into an interpreted output

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, Matlab, HTML/CSS, MIPS

Frameworks: Node.js, Flask, JUnit, WordPress

Developer Tools: Git, Docker, Dremio, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

Libraries: pandas, NumPy, TensorLy, Matplotlib