MATT PRODANI

New York, NY · *mattp@nyu.edu* · (929) 420-6078 · *mattprodani.github.io*

EDUCATION

New York University, Courant Institute of Mathematical Sciences — New York, NY

B.A. Computer Science, Minor in Mathematics, Major GPA: 3.82/4.0. — May 2024

Activities: Competitive Programming (ICPC), Computer Science Club

SKILLS

Languages:	**Proficient:** C, C++, Python, Java **Familiar:** Scala, JavaScript, SQL, HTML/CSS, x86 Asm, Matlab, R
Tools:	AWS, Distributed Systems, Azure, Unix, Bash, Snowflake, Docker, TensorFlow, Git, Agile

WORK EXPERIENCE

New York University — New York, NY

Teaching Assistant - CS202 Operating Systems — Sep 2023 - Dec 2023

Amazon Web Services — Cupertino, CA

Software Development Engineer Intern - Networking — May 2023 - Aug 2023

⋄ Redesigned version control tool to properly handle and produce clean change logs for noise-heavy network configurations for internal Linux-based OS, adding support for more than half of AWS network devices.

⋄ Developed a new extensible configuration parsing engine to handle ambiguities in configurations, producing reliable diffs and additionally enabling support for other hierarchical configs (JSON, YAML).

⋄ Created a scalable emulation tool for configurations on AWS EC2 instances, enabling network engineers to preview noise-free configurations on virtual machines prior to deployment.

⋄ Implemented ReGex-based extensibility features to allow end-users fine-tuned control over parsing and diffing mechanism rules.

Symend — New York, NY

Software Engineer Intern - Predictive Services — May 2022 - Dec 2022

⋄ Designed Transformer-based Deep Learning model for time series data in TensorFlow, increasing AUC scores by 10%

⋄ Optimized ML pre-processing pipeline with memory techniques, reducing runtime from 15 minutes to <1 minute.

⋄ Automated cache for model queries using a Snowflake database solution with batch processing, reducing redundant usage

⋄ Developed Dashboard Python package to streamline and increase efficiency in dashboard creation for data analysts

PROJECTS

Notion-DB *Python, pytest, Sphinx* — *github.com/mattprodani/notion-db*

Open-source Python client for the Notion API, streamlining personal database automation

FolioWatch *Python, Pandas, BeautifulSoup, Docker, AWS* — *github.com/mattprodani/FolioWatch*

Solution for automated portfolio research: web scrapers, CSV compilation, authentication, daily reports via GMail API

Internet of Things Canvas *C++, Arduino* — *github.com/mattprodani/iot-painting*

Smart canvas that uses an Arduino attached to a painting with electric paint to change room colors according to the color of the paint tapped by sending websockets

School Projects *C, x86 Assembly, gdb, Valgrind*

⋄ **JakartaScript:** Custom JavaScript interpreter written in Scala.

⋄ **nyush:** Custom Unix shell in C with advanced features.

⋄ **nyuenc:** Multithreaded data compressor.

⋄ **nyufile:** FAT32 filesystem recovery tool.

RELEVANT COURSEWORK

CS:	Graduate Cryptography, Data Structures, Algorithms, Computer Systems, Data Science, Intro to ML, OS, Numerical Computing, Parallel Computing, Programming Languages, Natural Language Processing
Math:	Discrete Math, Linear Algebra, Multivariable Calculus, Probability, Statistics, Combinatorics