Cameron McGinley

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Education

University of California San Diego — **La Jolla, CA**
M.S. in Computer Science | Systems Specialization | GPA: 3.95 / 4.00 — *Sep. 2022 – Dec. 2023*

Wichita State University — **Wichita, KS**
B.S. in Computer Science | Minor in Mathematics | GPA: 3.99 / 4.00 — *Aug. 2018 – May 2022*

Experience

Software Engineer Intern — **June 2023 – Aug. 2023**
Capital One — *McLean, VA*

- Created **AWS Lambda** functions with **Python** for automated data collection from **AWS EMR** instances.
- Leveraged **Databricks** to build clusters and compute business and performance metrics with **PySpark** based on **50-100k records** daily.
- Automated dashboard and report generation and delivery via **SMTP** and **Slack webhooks** to stakeholders.

Software Engineer Intern — **May 2022 – Aug. 2022**
U.S. Government — *Washington, D.C.*

- Led the design and implementation of a **Python-driven C/C++ software assurance system** specializing in **lexical analysis**, handling source code with **millions of lines of code** at speeds **30-50x faster** than previous toolset.
- Applied **secure coding** expertise to write **Python** test cases to identify more than **20 types** of source code vulnerabilities, such as weak cryptography or self-modifying code.

Test Engineer Intern — **May 2019 – May 2022**
NetApp — *Wichita, KS*

- Wrote **Python** scripts to automate **firmware testing** for **data storage systems**, ensuring stability and interoperability across diverse configurations of **servers**, **switches**, **drives**, and **communication protocols** (e.g., iSCSI, NVMe).
- Developed **Python** software to collect and track test configurations and versions through **NetApp**, **Windows**, and **Linux** system **APIs**, saving each QA engineer **10 minutes daily** and improving management's view of testing.

Machine Learning Research Intern — **June 2021 – July 2021**
Purdue University — *West Lafayette, IN*

- Developed a **Python-based scraper** to generate datasets of buggy and non-buggy **Java** code from open-source repositories and **train basic ML models**.
- Computed cross-entropy on n-grams of this code, discovering up to **15% greater entropy** in buggy lines of code.

Machine Learning Research Intern — **June 2020 – Aug. 2020**
Wichita State University — *Wichita, KS*

- Utilized **Python**, **TensorFlow**, and **Keras** to build a malicious email classifier on a convolutional neural network, optimizing a final model for accuracy (**98.1%**), recall (**98.1%**), and precision (**98.3%**)

Highlighted Projects

SiteWatch | GitHub | Typescript, Python, Redis, AWS (Lambda, DynamoDB, API Gateway), Next.js

- SaaS for automating scraping and custom checks on user uploaded URLs, parameters, and intervals.

Brainfk Compiler** | GitHub | C++

- Compiler implementing instruction folding and pattern-based optimization for >99% decreased runtime.

Skills

Languages: TypeScript/JavaScript, Python, C++, SQL
Frameworks/Libraries: Docker, React, Next.js, Node.js, GraphQL, Pandas, PySpark, Express, Jest
Cloud/DevOps: AWS (Lambda, DynamoDB, API, etc.), Postgres, Firebase, Databricks, Snowflake, Jenkins, IaC
Tools: Git, Linux (RHEL, SUSE), Postman, GDB, Valgrind