Frederik Hoffmann

SOFTWARE ENGINEER · MASTER'S DEGREE CANDIDATE, COMPUTER SCIENCE

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Work Experience

Amazon Web Services

Software Development Engineer (AWS Systems Manager) · *2022 - 2023*

- Empowered OpsCenter customers (56K active WoW) to increase security posture by designing/coding attribute-based access control service.
  - Integrated with AWS Identity service, allowing customers to scope resource access based on resource metadata.
- Migrated 13 internal/external APIs from manual to automated security testing framework, bringing coverage to 100%.
  - Improved team development velocity from months to weeks by leveraging this immediate automated security coverage.
- Implemented custom alarms, metrics, logging, and dashboards to monitor new feature adoption and health. Logging and runbook additions helped bring on-call MTTR down to minutes from hours, saving time, money and customer impact.
- Wrote code, tests on 4 dev team for design, implementation of feature to support cross-account resource access. Reduced latency on calls to AWS Organizations API, saving up to 30s in some cases.
- Authored design documents and drove team consensus on new feature design and implementation.

Lockheed Martin, Santa Barbara Focalplane

Electro-Optical Infrared Imaging Systems Engineer · *2018 - 2022*

- Technical Lead on largest infrared camera contract for site. Regularly worked with partner teams and customers in multiple US location.
- Led technical projects, 4 technicians, 2 test engineers. Managed budget. Researched, documented, communicated technical details, and defended proposals, analysis to site leadership.
- Implemented simulation of upstream image-processing suite, extensible to different types of imagery data. Software enabled validation/introduction of new detector design. Obsoleted need for additional in-flight testing and validation, saving months of planning and thousands of dollars.
- Performed statistical analysis on infrared camera data (MATLAB, Python), which informed process changes, reduced failure modes, improved yield. Cases include complete reduction of infant mortality failure mode, and improvements in detector yield by up to 50% in some runs.
- Developed, released production software to test camera systems and measure performance against requirements.

AppFolio, Inc

Customer Success Manager · *2017 - 2018*

- Trained 100+ clients on usage of AppFolio SaaS Property Management software.

Projects

Multi-threaded Distributed File System · *GATech*

C++, gRPC, Docker, Linux, WSL2 · *2021*

- Designed a distributed multi-threaded file server/storage in C++, which will list, upload, download, and delete a consensus of shared files across multiple clients (threads).

Classification-Based Learner for Stock Trading · *GATech*

Python, Pandas, NumPy, Linux · *2021*

- Stock bot that advises buy/sell/short decisions. Trained via Classification-Based Decision Tree learner on an input data set of historical price/volume data. Yielded positive returns after training period.

Education

Georgia Institute of Technology

M.S. Computer Science · *Jan 2021 - Dec 2023 (Expected)*

- Artificial Intelligence, Computer Architecture, Computer Networks, Machine Learning for Trading, Operating Systems, Information Security

University of California, Santa Barbara · *Goleta, CA*

B.S. Physics · *Jun 2017*

Skills

AWS	CloudFormation · CloudWatch · Systems Manager · EC2 · Lambda · APIGW
Tools and Frameworks	REST APIs · JUnit · PyTest · Git · NumPy · boto3 · AWS CLI
Languages	Python · Java · C/C++ · MATLAB