Johann Miller

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Education

University of Maryland, College Park — Sep 2016 - May 2020
B.S. in Computer Science, Honors. *GPA: 3.9/4.0*

Experience

Airbnb, *Software Engineering Intern* — Jun 2019 - Aug 2019
- Created a presentation service for an SOA migration (Java)
- Built a code generator for adding policies to a rules engine (Ruby)
- Improved failure modes and observability of a rules engine (Scala)

Databricks, *Software Engineering Intern* — Jan 2019 - April 2019
- Enabled real-time log and metric delivery (Kafka/Scala/Kubernetes)
- Built a high performance service for processing and caching streaming data
- Added online functionality to approximate counting in Spark SQL

Flatiron Health, *Software Engineering Intern* — Jun 2018 - Aug 2018
- Reduced time of diagnosis lookup by 75% (self-managed Elasticsearch)
- Built ETL pipelines for Elasticsearch ingestion (Python/PostgreSQL)
- Created diagnosis recommender system (Tensorflow/React)

NASA, *Software Engineering Intern* — Jun 2017 - Aug 2017
- Developed a package manager for a satellite operating system (Ruby)
- Built a kit combining satellite and ground system software

Research

Distributed Databases, University of Maryland — Jan 2020 - Current
- Designing and building a geo-replicated deterministic DBMS (C++)
- Working in the lab of Prof. Daniel Abadi

Project Sidewalk, University of Maryland — Aug 2017 - Jan 2018
- Analyzed data quality of crowd-sourced street-accessibility data (Python/Scikit)
- Worked in the lab of Prof. Jon Froehlich

National Cancer Institute, NIH — Jun 2015 - Aug 2016
- Built RNA 3D structure predictor using simulated annealing (Java)
- Published in Nucleic Acids Research: *Functionally-interdependent shape-switching nanoparticles with controllable properties*

Teaching

CMSC389F Reinforcement Learning, *Instructor* — Aug 2018 - Dec 2018
- Designed and taught a course on AI, advised by Prof. James Reggia

CMSC351 Algorithms, *Teaching Assistant* — Aug 2018 - Dec 2018
- Taught students principles of algorithms under Prof. Clyde Kruskal

Awards

CS Departmental Scholarship, University of Maryland — 2018
1st Prize, Johns Hopkins Hackathon — 2017
Presidential Scholarship, University of Maryland — 2016

Skills

Experienced: Java, Python
Familiar: Scala, C++, SQL, Ruby, Kafka, Spark, Elasticsearch, Kubernetes