Hari **Amoor**

Undergraduate Student · Rutgers University - New Brunswick

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Summary

I am an undergraduate student at Rutgers University, pursuing a B.S. in Computer Science and Mathematics. I am currently pursuing a role as an entry-level software engineer.

To date, I have completed multiple software engineering internships, most notably at Facebook in Menlo Park, CA and at MongoDB in New York, NY. My work at Facebook involved server-side processes for crash triaging of Android applications, while that at MongoDB involved various services and interfaces to provide support for high-volume and high-complexity OLAP workloads with the MongoDB query interface.

My largest areas of interest in computer science are in distributed systems, programming language theory, and to a lesser extent in complexity and computability theory. In mathematics, I am also a hobbyist in algebra and combinatorics.

Skills

Languages	C++, Rust, Haskell, Idris, Go, Clojure, Python, JavaScript
Data Solutions	MongoDB, SQL Server, Apache Hive, Apache Thrift, Apache Kafka, ElasticSearch
Academic Areas of Interest	Distributed Systems, Programming Languages/Compilers, Operating Systems, Computer Networks

Experience

MongoDB, Inc.

New York, NY

Software Engineer Intern

Jun. 2020 - Aug. 2020

- Assisted in coordinated effort across the Enterprise Tools department for improved MongoDB support for high-volume and high-complexity OLAP workloads
- Improved correctness and logging behavior of the MongoDB Database Tools – a suite of command-line interfaces for database operations
- Spearheaded team-wide initiative for optimization of the Tools' performance characteristics, which resulted in up to a 25% improvement in runtime performance
- Enabled a significant reduction in cases of undefined behavior across many of the department's products

Facebook, Inc.

Menlo Park, CA

Software Engineer Intern

May 2019 - Aug. 2019

- Engineered and maintained an end-to-end system to monitor application failures and expose a data warehouse of crash metadata for internal usage
- Designed and implemented a major refactoring of the categorization service for failures in native code on Android
- Improved server-side support of LLVM features such as sanitization of memory addresses and thread metadata which are increasingly utilized in mobile apps
- Enabled the reduction of cases of misaggregation and over-aggregation by the crash triaging pipeline by over 31%

Education

Rutgers University - New Brunswick

Piscataway, NJ

B.S. in Computer Science and Mathematics

Sept. 2017 - PRESENT

- **Coursework - Computer Science:** Operating Systems, Computational Robotics, Design and Analysis of Algorithms, Formal Langauges and Automata, Programming Languages & Compilers
- **Coursework - Mathematics:** Linear Algebra, Abstract Algebra, Real Analysis, Graph Theory, Finite Fields (audit), Combinatorics (audit)

Projects

Redundant Services Optimization Solver

Rutgers University – New Brunswick

Open-Source Contribution

May 2020

- Simplified implementation of Dr. Uli Kremer's RSDG Algorithm for optimization of redundant services in a class of programming language theory problems
- Utilized the Gurobi mathematical optimization solver to carry out a reduction of an NP-complete graph theory problem to a linear optimization problem

Tiny To-Do CLI (Tutorial)

Rutgers University – New Brunswick

Open-Source Contribution

May 2020

- Tutorial of the Rust programming language – a command-line interface over a persistent to-do list CLI
- Provided extensive aside system for further information and resources in understanding operating systems, programming languages theory, category theory, and homology type theory