

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.

My area of interest in software is in backend and infrastructure-related products and processes. I love learning about different technologies, systems, and concepts in order to broaden my knowledge and perspectives as both a developer and an end-user of software. Therefore, I strive to pursue my academic interests in computer science, mostly in areas such as distributed systems, programming language theory, and network operations.

A lifelong student in more ways than one, I am also a hobbyist in theoretical computer science and abstract math; I particularly enjoy learning about complexity theory, algebra, and combinatorics. I see it as my duty and my privilege to continuously pursue mastery of different bodies of knowledge and contribute to human advancement in all analytical pursuits.

Experience

MongoDB, Inc.

New York, NY

SOFTWARE ENGINEER INTERN

Jun. 2020 - Aug. 2020

- Supported an 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 several tasks to achieve optimization of the Tools' performance characteristics, resulting in over a 25% improvement in runtime speed
- 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 utilization of LLVM metadata, which is increasingly important for triaging Facebook 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 Languages and Automata, Programming Languages and Compilers
- **Coursework - Mathematics:** Linear Algebra, Abstract Algebra, Real Analysis, Graph Theory, Finite Fields (audit), Combinatorics (audit)

Skills

Languages C++, Rust, Haskell, Go, Java, Python, JavaScript

Technologies MongoDB, SQL Server, Hive, Thrift, Kafka, ElasticSearch

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

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 theoretical context in operating systems, programming languages theory, category theory, and homology type theory

Ludicrous Card System

Rutgers University – New Brunswick

HACKRU RND TEAM

Oct. 2018

- REST API for web backend services utilized by various web and mobile apps designed for use by hackers and hackathon staff
- Supported the deprecation of a legacy service in favor of the new cloud-hosted and microservice-based system