Hari Amoor

Undergraduate Student · Rutgers University – New Brunswick

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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 - May 2021*
- **Coursework - Computer Science:** Operating Systems, Computational Robotics, Design and Analysis of Algorithms, Formal Langauges and Automata, Programming Languages and Compilers, Computer Networks, Internet Services, Advanced Data Management
- **Coursework - Mathematics:** Linear Algebra, Abstract Algebra, Real Analysis, Graph Theory, Finite Fields (audit), Combinatorics

Skills

Languages	C/++, Golang, Haskell, Java, Python, Rust
Data Technologies	SQL (MySQL, SQL Server), MongoDB, Apache Hadoop Ecosystem (HDFS, Hive, Spark), Amazon Web Services

Projects

Redundant Services Optimization Solver   *Rutgers University – New Brunswick*
Open-Source Contribution   *May 2020*
- Implemented 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*
- Designed a tutorial of the Rust programming language – 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

Leadership

Undergraduate Student Alliance of Computer Scientists   *Rutgers University - New Brunswick*
Project Manager Chair   *Sept. 2018 - May 2019*
- Supervised bimonthly USACS mini-hackathon – designed for novice and experienced students alike
- Manages collaboration on USACS open-source contributions and software written for nonprofits and humanitarian organizations

HackRU R&D   *Rutgers University - New Brunswick*
Software Architect   *Sept. 2017 - May 2018*
- Developed software for use by staff and hackers at HackRU - the biannual Rutgers hackathon
- Conducted in-hackathon workshops to help hackers learn about and utilize various open-source technologies