RIBHAV JAIN

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Education

University of Illinois at Urbana-Champaign Aug. 2017 - May 2021
B.S. Computer Engineering (Minor in Business) - GPA: 3.88
James Scholar and Dean's List

Work Experience

MongoDB Inc. - **Software Engineering Intern** June 2020 - Aug. 2020
New York, NY

- Optimized MQL queries by rearranging & rewriting query plan pipelines to improve aggregation latency for all users
- Unified the MongoDB query language parsing code by shifting to a grammar-based approach making it more efficient and maintainable
- Parsed, tokenized and transformed queries into concrete syntax trees for improved distributed processing & execution
- Used C++, JavaScript, Python, and Bison

Viasat Inc. - **Software Engineering Intern** May 2019 - Aug. 2019
Seattle, WA

- Developed a full-stack self-service application to allow 6000+ employees to manage their 2FA-Auth saving 250+ man-hours annually
- Deployed the distributed system architecture with multiple REST APIs to AWS and automated all processes using CloudFormation
- Secured, tested and launched into production in multiple locations globally for the cloud engineering team
- Won the Viasat Intern Hackathon with 200+ interns and presented to CEO Mark Dankberg
- Used AWS (EC2, Lambda, DynamoDB, SES, Beanstalk, S3, etc), Django, React, Flask, Ansible, Python, and JavaScript

ProCogia - **Data Science Intern** May 2018 - Aug. 2018
Seattle, WA

- Spearheaded the development of end to end business intelligence reports, visualizing data and analyzing KPIs, for a major telecom provider
- Improved turnaround time on detection and remediation of anomalies in the network by over 4% by generating insights
- Implemented scripting and data validation to help create a data pipeline for machine learning model development
- Used Python, SQL Server, Tableau, and Qlik

Projects

CloudNet - Distributed File System Jan. 2020

- Developed a fault-tolerant distributed file system that allowed users to store and modify files in the cloud
- Implemented replication, sharding, consistency, and node failure detection (detected machine failures in ~600 milliseconds)

AlphaCloud - Hackathon winning project July 2019

- Developed a fully functional web app with persistence to connect 65M+ victims to volunteers
- Created a login page, admin analytics and a volunteer view featuring maps and various sortable tasks

MentOS - Unix based Operating System Apr. 2019

- Built a Linux kernel from scratch and provided a handler to deal with interrupts, exceptions and system calls
- Used C and x86 assembly to implement file systems, paging, and scheduling

Skills

LANGUAGES AND FRAMEWORKS: Python, C++, C, Java, JavaScript, AWS, HTML, CSS, Django, Flask, React, Node.js, MongoDB, Angular, Ansible, Tableau, Qlik, SQL
RELEVANT COURSES: Data Structures & Algorithms, Computer Systems Engineering, Distributed Systems, Artificial Intelligence, Discrete Structures, Probability with Engineering Applications, Computer Systems and Programming, Intro to Computer Security, Algorithms & Models of Computation

Activities & Leadership

Data fusion framework - Research Assistant Aug. 2020 - Present

- Migrated, secured and correlated time-series data linking external sensors with internal microscopy statistics in the cloud
- Used MongoDB, InfluxDB, ZeroMQ, 4CeeD and Clowder

Pulse UIUC - Marketing Director Apr. 2019 - Present

- Leading the Marketing Team for Pulse - the largest student-run tech conference at UIUC
- Interacting with corporates and organizations to ensure Pulse gets campus-wide exposure to 20,000+ students

SigGraph Chair - Association for Computing Machinery (ACM) Aug. 2018 - May 2019

- Led the special interest group for Computer graphics and Virtual Reality in ACM for the academic year
- Organized tutorials in JavaScript and Unity and worked on various projects with 50+ SIG members

ECE 120 Intro to Computing - Course Assistant Aug. 2018 - Jan. 2019

- Assisted professors with the course material and grading for ECE 120 with 400+ students
- Helped with material on finite state machines, logic analysis, computer systems, and machine language programming