

SHUBHAM ARORA

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EDUCATION

Boston University

MS in Computer Engineering, GPA: 3.68 / 4

Courses: Distributed Systems, Cloud Computing, Parallel Programming

Boston, MA

Sep. 2019 - Dec. 2020

Netaji Subhas Institute Of Technology, University Of Delhi

BE in Computer Engineering, GPA: 70.8%

Courses: Data Structures and Algorithms, Operating Systems

Delhi, IND

Aug. 2013 - Jun. 2017

EXPERIENCE

Boston University

Research Assistant

Boston, MA

May 2020 - Present

- Responsible for implementing data synchronization protocols, and to compare performances of various protocols, in C++
- Implemented *Inverted Bloom Lookup table* (IBLT), a data structure for efficient data synchronization among peers in a distributed system
- Developed the testing infrastructure to compare and benchmark multiple algorithms, under varying workloads

Arcesium India Pvt.Ltd.

Software Engineer

Hyderabad, IND

July 2017 - July 2019

- Designed and developed business features for D.E. Shaw's expense management and reporting system
- Developed and maintained web services to create and manage business reports, using Java and a SQL server database
- Improved client productivity by reducing process turnaround time from 10 mins to 30 sec
- Created rich User Interfaces in ReactJS and JavaScript. Developed custom form processing and grid editing features
- Improved application stability by following Test Driven Development, increased code coverage from 10% to 50% through unit and integration tests

PROJECTS

Boston University

Boston, MA

Distributed transactions

Mar. 2019 - May 2020

- Design and implemented a transaction library on Ray, a general-purpose cluster computing framework
- Implemented and evaluated Distributed Sagas, an extension of the Saga pattern for coordinating transactions on microservices, using Python
- Used the actor framework as a model for concurrent computation
- Implemented a sample trip booking application in Python to measure performance

Fault tolerant key value store

Feb. 2019 - May 2020

- Implemented a fault tolerant key value store using the RAFT consensus protocol, in Go
- The key-value service is a replicated state machine, can tolerate failures of a minority of nodes
- Implemented Get, Put primitives using RPC's

Data Visualization website for MA Schools

Oct. 2019 - Jan. 2020

- Created a website for data visualizations of the demographic data of high school AP - CS students in Massachusetts
- Built upon design mockups to code a single page web application in ReactJS
- Created custom UI components and leveraged open source charting libraries
- Website is live at <https://digitalequityma.com>

Netaji Subhas Institute Of Technology, University Of Delhi

Innovision Website

Delhi, IND

Jan 2016 - Mar 2016

- Led a team to develop the website for the 2016 technical fest of NSIT using Express JS, MongoDB
- Deployed the website to Digital Ocean. Received 65000+ page views and 5000+ registrations
- Created workflows for user registrations, social login, event managements and email campaigns

TECHNICAL STRENGTHS

Languages & Frameworks

C++, Java, GoLang, Javascript, ReactJS, Python, Spring

Other

Linux, Git, Bash, Agile, TDD