

SHUBHAM ARORA

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EDUCATION

Boston University

MS in Computer Engineering

Courses: Distributed Systems, Cloud Computing, Software Engineering at Scale
Parallel Programming, Robot Learning for Navigation, Robot Motion Planning

Boston, MA

Sep. 2019 - Jan. 2021

Netaji Subhas Institute Of Technology, University Of Delhi

BE in Computer Engineering

Courses: Data Structures and Algorithms, Operating Systems, Computer Architecture

Delhi, IND

Aug. 2013 - Jun. 2017

EXPERIENCE

Boston University

Research Assistant

Boston, MA

May 2020 - Dec 2020

- Responsible for implementing data synchronization protocols, and to compare run time performances, 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
- Led project planning, development and deployment for critical projects, spearheading discussions with clients and stakeholders
- Created rich User Interfaces in ReactJS. Developed custom form processing and grid editing features
- Led the transition of the Web UI stack from vanilla Javascript to ReactJS
- Ported business logic from SQL procedures to Java services and improved client productivity by reducing process turnaround time from 10 mins to 30 sec
- Deprecated Flash based web pages, and created new UIs in HTML, Javascript
- 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

Cloud Native Deployments of Bare-Metal AI Workflows

Jan. 2020 – May. 2020

- Determine performance effect of porting an AI workflow from MIT's HPC cluster to OpenShift on Mass Open Cloud
- Containerize the AI application for the IBM Power9 processor using Docker
- Create configuration files for creating the app image and deploying containers
- Wrote bash scripts to measure CPU and GPU usage on both the HPC cluster and MOC OpenShift

Fault tolerant distributed 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
- Created custom UI components and leveraged open source charting libraries
- Website is live at <https://digitalequityma.com>

TECHNICAL STRENGTHS

Languages & Frameworks

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

Other

Linux, Docker, Git, Bash, AWS, EC2, S3, Agile, MySQL, TDD