

# Ruchir Agarwal

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## EDUCATION

### San Jose State University - San Jose, CA, USA

Master of Science in Computer Software Engineering

Enterprise Software Platform | Enterprise Distributed Systems | Data Mining

January 2021-December 2022 (Exp.)

GPA 3.77

### Dr. A.P.J. Abdul Kalam Technical University - India

Bachelor of Technology in Computer Science and Engineering

August 2012-May 2016

## TECHNICAL SKILLS

**Language:** Java, JavaScript, C#, VB.NET

**Database:** MongoDB, MySQL, Redis

**Front-end:** React, Redux, HTML5, CSS3, Bootstrap

**Back-end:** REST API, NodeJS, ExpressJS, Apache

Kafka

**Tools:** VSCode, IntelliJ, Postman, JIRA, GitHub, TFS, Confluence

**Testing:** Mocha, JMeter

**Cloud/DevOps:** AWS (EC2, ECR, S3, RDS), Docker, Kubernetes

## WORK EXPERIENCE

### GrapeCity India Pvt. Ltd - Noida, India

April 2016-December 2020

#### Software Engineer

**Technologies:** .NET, C#, WPF, WinForms, .NET Core, VB.NET, UWP

- Analyzed and executed client requirements using GrapeCity products adhering to .NET architecture and Agile-Scrum methodology
- Refactored the codebase, resulting in a 24% improvement in response time
- Collaborated with clients and the product manager to design and facilitate user engagement activities and execute User Acceptance Testing (UAT) shooting up stakeholder acceptance by 38%
- Modularized the code into reusable components and integrated in internal test framework
- Conducted unit testing of the modules before migrating to QA/UAT servers

### Sahaj eVillage Limited - Noida, India

June 2015-July 2015

#### Software Developer - Summer Intern

**Technologies:** .NET, C#

- Prepared scripts for storing and retrieving the sensitive data for millions of beneficiaries of the government's skill development programs
- Applied data validation checks and security measures, preventing misuse of the government schematics

## PROJECTS

### Splitwise Prototype

February 2021-March 2021

**Technologies:** MongoDB, MySQL, Express, Node.js, React, Redux, Kafka, AWS (ECR, S3)

- Developed a distributed web application which enables users to track bills and split shared expenses
- Built RESTful APIs using Node.js and Express.js, and integrated kafka for increasing system availability and scalability
- Enforced request authentication using Json Web Tokens (JWT), and incorporated Redux for state management
- Boosted application response time by 21% utilizing SQL connection pooling
- Performed load testing using JMeter for 1000 users, and deployed the dockerized web application to AWS ECR

### Reddit Simulation

April 2021-May 2021

**Technologies:** MongoDB, Express, React, Redux, Node.js, Kafka, AWS (EC2, S3), Redis, SocketIO, Kubernetes

- Co-ordinated with a team of five to simulate the website Reddit and implemented Redis caching which improved system performance by 35%
- Deployed sharded MongoDB cluster and incorporated role-based access for community management
- Implemented real-time messaging feature using Socket IO and used AWS S3 as an image server for high throughput
- Managed concurrent requests from 5000 users by utilizing load balancing through Kubernetes and hosted the application on AWS EC2