

RENJI JOSEPH SABU

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EDUCATION

Master of Computer Science - North Carolina State University, USA | GPA: 3.88 May 2023

Relevant Courses: Algorithms, Software Security, OOP, UX, Cloud Computing, Databases, Software Engineering, IoT

Bachelor of Technology in Electrical and Electronics Engineering - Mahatma Gandhi University, India May 2018

SKILLS

- **Languages/Libraries:** JavaScript, SQL, React.js, Node.js, Go, Java, HTML, CSS, Python, WebSocket API
- **Other Tools:** REST, AWS, Git, Redis, MongoDB, Firebase, Stripe, Twilio, Linux, Docker, Postman, JIRA

WORK EXPERIENCE

Software Development Engineer Intern - Amazon, Seattle, WA May 2022 - Aug 2022

- Constructed an API endpoint in Java and Spring Boot interacting with multiple microservices to return a customer's progress towards fulfilling requirements of a promotion, and automated extensive unit testing using Junit.
- Collaborated closely with UX designer to implement a design using CSS flexbox boosting alignment of products in promotions shopping page in Amazon website enhancing readability, scannability and habituation.

Software Engineer - HiFX (hifx.in), Cochin, India Jul 2018 - Jul 2021

- Spearheaded development of relational databases (MySQL) and NoSQL databases (Redis, Firebase).
- Selected and designed databases to suit relational, document and key-value data while maintaining cross-database data integrity.
- Leveraged Go and Node.js with Echo and Express.js respectively to design and implement RESTful, well-structured, and documented APIs.
- Developed fast and responsive single page web applications utilizing React with JavaScript.
- Applied OAuth2.0 authentication modules utilizing JWT, access and refresh tokens and secure cookies.
- Integrated social login support using Google, Apple and Facebook.
- Devised robust payment solutions for web applications applying Stripe API and for mobile applications.

PROJECTS

Personalized Home Automation in IoT - NC State University, Raleigh, NC March 2023 - April 2023

- Led project to automate personalized settings using Raspberry Pi, supporting more than one occupant in room with RFIDs.
- Conducted code reviews and designed API structure with Node and Express and MongoDB schema.
- Leveraged MQTT Publish-Subscribe messaging to get live data, allowing users to control room settings in real time.

Open-Source Contribution - NC State University, Raleigh, NC February 2022 - May 2022

- Communicated with team to bring in internationalization on student portal built on Rails by leveraging I18n library.
- Introduced latest ES modules into front end, replacing older React code and ES5 implementations.
- Improved code readability by harnessing reusable components resulting in 25% reduction in total number of lines of code.
- Identified and rectified critical XSS and insecure cookie vulnerabilities which compromised user sessions and privacy.

Telemedicine Application - HiFX, Cochin, India March 2020 - October 2020

- Created a video call consultation system on Go and React.js to facilitate online consultation for medical practitioners and provide prescriptions adopting Twilio API and AWS Simple Storage Service.
- Managed time slot availability on Redis hashes to achieve faster result fetching instead of storing in SQL.
- Maintained doctor availability in Firebase real time database to display live status by syncing JSON data with client.
- Modeled AWS Simple Email Service, Apple Push Notification Service and Firebase Cloud Messaging to send notifications and reminders through mail and push notifications.

Real Time Chat System - HiFX, Cochin, India November 2018 - March 2019

- Employed cloud solutions such as AWS Simple Queue Service with consumer to develop a real-time chat system.
- Achieved better availability and reliability by employing message queue and consumer for storing messages to database.
- Improved horizontal scalability deploying Redis Pub/Sub in turn allowing multiple EC2 instances and Node.js clustering.