# Rajashekar Vennavelli

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## Professional Summary

Technology driven Software Engineer with a MS in Computer Science from Santa Clara University and 2 years of professional experience in web application development and backend development. Demonstrated expertise in Java, React.js, JavaScript and DevOps, with a commitment to elevating application functionality and efficiency via test-driven development. Award-Winning participant in numerous international hackathons, showcasing exceptional problem-solving abilities and a passion for leveraging AI to solve real world problems.

## Skills Summary

- **Languages**    Java, JavaScript, Python, SQL, HTML, CSS, C++
- **Frameworks**    Vue.js, React.js, Next.js, Webpack, npm, SpaCy, Flask, NodeJS, Tailwind CSS, Vite
- **Tools**    Kubernetes, Docker, JIRA, GIT, MVC, MySQL, Circle CI, CI, Jenkins, Jest, Cypress
- **Platforms**    Linux, Web, Windows, Arduino, Raspberry, AWS, GCP, Intel Developer Cloud, IBM Cloud
- **Soft Skills**    Leadership, Event Management, Writing, Public Speaking, Time Management, Customer Service

## Education

**Santa Clara University**                                                                                     Santa Clara, USA
*Master of Science - Computer Science and Engineering; GPA: 3.71*                    *September 2022 - May 2024*

**Courses:** *Distributed Systems, Machine Learning, Database System Design, Object Oriented Analysis, Design &Programming*

**PSG College of Technology**                                                                              Coimbatore, India
*Bachelor of Engineering - Computer Science; GPA: 3.58/4.0*                                  *July 2014 - June 2018*

**Courses:** *Operating Systems, Data Structures, Design & Analysis of Algorithms, Computer Architecture, Software Engineering*

## Experience

**Global Energy Consulting Engineers**                                                              Hyderabad, India
*Software Engineer (Full-time)*                                                                                *Nov 2020 - Jan 2022*

- Led the development of V2 for Power Audit public APIs, assuming ownership of the v2/notes domain for enhanced functionality and scalability and took ownership of multiple aspects of software development lifecycle (SDLC).
- Implemented a comprehensive password security upgrade for approximately 3 million users across Power Audit and Power Customer, enhancing overall system integrity and user data protection.
- Implemented a robust anomaly detection feature aimed at empowering CSRs to promptly identify power theft.
- Worked on decomposing the monolithic CRM system into microservices, taking charge of the Contacts API as a microservice for improved modularity and efficiency.

**Citibank**                                                                                                              Chennai, India
*Application Developer (Full-time)*                                                                        *July 2018 - Feb 2019*

- Developed & maintained Spring Batch applications to process large-scale data input files (>100GB), resulting in a remarkable 40 % improvement in data processing speed and a 30% reduction in overall latency.
- Implemented a suite of compliance metrics using SQL queries and Spring Batch to measure and track compliance across various applications, Led the development of REST APIs using Spring framework to facilitate seamless communication betweeen systems for data retrieval and complaince checking.
- Orchestrated batch runs using CRON expressions to automate daily data gathering, processing and calculation of compliance metrics, ensuring timely and accurate reporting
- **Impact:** Resulted in a significant 15% increase in the overall compliance rate

## Significant Projects

- **Built my own Redis Server (February 2024)**
  - Developed a custom Redis server using Python, incorporating RESP protocol, and implemented a suite of Redis commands including network client-server interactions, concurrency management, & data expiry.
  - Enhanced the server with advanced features like persistence, performance optimization, and Redis operations

- **Development of Micro-services and Exposing through an API Server (Novemeber 2023)**
  - Developed three basic micro-services in Node.js (MEAN Stack), Python Flask, and Java frameworks.
  - Utilized a Node.js API Server as an orchestrator to communicate with the microservices. Initiated communication between the microservices using RabbitMQ, employing sample RPC calls to initiate the communications.
  - Dockerized each micro-service in separate containers and linked them to RabbitAMQ for communication and CI using Apache Jenkins. Deployed the target application on Jetstream Cloud.

- **Tech Champions Coding Arena – Code Compiling Platform (June 2023)**
  - Developed a scalable online coding judge platform using the MERN stack. Designed and implemented a suite of features including user registration, problem management, live code submission and evaluation, along with a comprehensive problem repository and interactive leaderboards.
  - Integrated MongoDB for efficient data storage and retrieval of user profiles, challenges, and submissions.

## Honors and Awards

- Awarded 1st Prize at HackMIT 2023, under "Combining AI & Physical World Challenge" MIT IBM Watson AI Lab.
- Awarded 1st Prize at CalHacks 2023, under Intersystems Integrated ML innovation challenge, 2023.
- Awarded 2nd Prize at HackUTD 2023, under Goldman Sachs AI based algorithmic earnings forecasting.