SUJENDRA JAYANT GHARAT

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EDUCATION

Northeastern University, Boston, MA — May 2025
Master of Science in Information System — **GPA : 3.6/4.0**
Relevant Courses: Application Engineering Development with Java, Network Structures & Cloud Computing, Data Management and Database Design, Agile Software Development

University of Mumbai, Mumbai, India — May 2018
Bachelor of Engineering, Electronics Engineering

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java, Bash
DevOps Tools: Kubernetes, Docker, Terraform, Git, GitLab, GCP, AWS, Packer, Github Actions, CI/CD, Mosquitto, MQTT
Frameworks & Databases: Node.js, Flask, React.js, Angular, Express JS, SQL, PostgreSQL MongoDB

EXPERIENCE

Graduate Research Assistant – AI-CARING — Feb 2024 – Present
Northeastern University – Khoury College of Computer Sciences — *Boston, MA*

- Designed and implemented an ambient reminder system for individuals with Mild Cognitive Impairment (MCI)
- Constructed a full-stack smart reminder application using **React**, **Node.js**, and **JavaScript**, translating real-time user data and state of the house into actionable reminders, incorporating **Redux** for state management, Ant Design for UI components
- Integrated advanced LLMs like **OpenAI's GPT series** into AI chatbots, using dynamic prompt templates and decomposition strategies (**few-shot** and **zero-shot** prompting) to generate JSON outputs with required sensors and activities for reminders
- Engineered a real-time data processing system using **Python**, **Mosquitto**, and **MQTT** to integrate house sensor data and user activity data, managing a network of 120 sensors and processing data at an average rate of up to 3,000 entries per second

Senior Software Engineer — Feb 2022 – Aug 2023
Capgemini — *Mumbai, Maharashtra*

- Orchestrated RESTful API calls for Multi-Modality AI using **Python** and **Flask**, achieving 40% improvement in response times
- Maintained 99.9% uptime, boosted scalability, and reduced resource costs by deploying applications on **Kubernetes** clusters with Agile methodologies
- Leveraged **Docker** for CI/CD**,** enhancing server deployment efficiency by 30% and reducing build times by 25% on servers
- Authored automation scripts using **Batch** and **Bash**, utilized by 50+ team members, reducing support dependencies by 40%

Software Engineer — Aug 2018 – Feb 2022
LTIMindtree — *Mumbai, Maharashtra*

- Led integration of 30+ third-party RESTful and SOA APIs in **Node.js**, collaborating with cross-functional teams and vendors
- Developed an interactive data visualization feature with **Chart.js**, **Highcharts**, **D3.js** in **Angular**, allowing users to monitor electricity consumption across various time frames and manage usage effectively
- Enhanced **REST API** performance by leveraging advanced concurrency and asynchronous patterns in **JavaScript**/**TypeScript**, and implementing **MongoDB** caching in Node.js, resulting in a 15% boost in response times and a 30% reduction in API calls
- Optimized application performance and scalability by using Node.js **cluster module** to distribute incoming requests across multiple cores, achieving a 40% efficiency increase
- Implemented **graceful shutdowns** and **process monitoring** in Node.js, reducing recovery time from errors by 50%, preventing resource leakage by 20%, and maintaining uninterrupted application operation with 99.9% uptime

ACADEMIC PROJECTS

Cloud Native Web App — Jan 2024 – Apr 2024

- Provisioned **Packer** and **Terraform** to provision pre-configured machine instances, resulting in a 75% reduction in configuration time and facilitating swift deployment of infrastructure changes
- Built **serverless** user verification system with **Cloud Function** for email verification and tracking in **Cloud SQL**
- Deployed an autoscaling **load balancer** with a 99.9% availability SLA, ensuring reliable and efficient distribution of traffic to the web application instances

Moving and Storage Rental Services — Sep 2023 – Dec 2023

- Introduced a **unique reward system** to balance supply and demand by incentivizing customers to drop off trucks or trailers at high-demand locations, solving a problem faced by UHAUL
- Utilized **Flask's Server-Side Rendering** (SSR) to enable efficient CRUD operations on the **MS SQL** database