

RUSHANK MIHIR SHAH

✉ rushankshah65@gmail.com | ☎ +1 213-234-8568 | 📄 Portfolio | 🐙 GitHub | 🔗 LinkedIn

EDUCATION

- **University of Southern California, Los Angeles, CA** Aug 2022–May 2024
M.S. in Computer Science. (CGPA 3.81/4)
- **Dwarkadas J. Sanghvi College of Engineering, Mumbai, India** Aug 2018–May 2022
B.E. in Information Technology. (CGPA 9.55/10)

PROFESSIONAL EXPERIENCE

- **C3.AI, Redwood City, USA — Associate Software Engineer** July 2024–Present
 - Developed and deployed 7+ enterprise-level Generative AI applications, driving \$2M+ in revenue across sectors like State & Local Government, Manufacturing, and Iron & Steel. Utilized PGVector DB for Retrieval-Augmented Generation (RAG), integrated Gemini/OpenAI LLMs, and leveraged React, RhinoJS, and Python for scalable, high-performance solutions.
 - Engineered and optimized data ingestion pipelines for structured (MSSQL, BOMsNet) and unstructured (PDF, Docx) data, applying advanced multimodal chunking and indexing techniques to ensure efficient, accurate data retrieval.
- **ClaimBrite Inc, Remote (Colorado), USA — Software Engineer Intern** Feb 2024–May 2024
 - Built and launched a responsive, customer-facing website using Next.js and Tailwind CSS, improving user experience through optimized performance, modern design, and mobile-first responsiveness.
 - Collaborated cross-functionally with designers, product managers, and stakeholders in an agile development environment to collect user feedback, iterate on features, and implement design improvements, resulting in a more intuitive and user-centric website.
- **C3.AI, Redwood City, USA — Software Engineering Intern** Jun 2023–Aug 2023
 - Developed and maintained an AI-based predictive maintenance platform for a manufacturing facility with 1500+ sensors, collaborating with a leading U.S. private company and used JavaScript, Python to optimize data processing and predictive analytics.
 - Built a full-stack application using ReactJS and Python supporting 800+ ML models, allowing users to customize hyperparameters and test models in real-time via a user-friendly UI, streamlining model experimentation and deployment.
- **Keck Medicine of USC, Los Angeles, USA — Application Developer Intern** Oct 2022–May 2023
 - Collaborated with the Salesforce team to enhance the call center experience at Norris Cancer Hospital, using Apex and Lightning Web Components (LWC).
 - Utilized SharePoint, Power Automate, and JavaScript to streamline and automate manual tasks within the organization.
- **Harvard Medical School (McLean Hospital), Boston, USA — Research Developer** Jul 2021–Jul 2022
 - Developed a Mental Health application for Dr. David Rosmarin, managed all the project's backend and iOS side (Flutter), including HIPAA compliance, and worked on the security aspects of the application.
 - Leveraged AWS services including DynamoDB, Elastic Beanstalk, Route 53, Cognito, and S3 for backend development, routing, authentication, and video hosting, ensuring scalable and secure application infrastructure.
 - Acted as the project's only POI (Person of Interest) by contacting the cloud security team and leading the team with the security and hosting services.
- **METX Robotics, Mumbai, India — Research and Teaching Assistant** Apr 2019–Jun 2021
 - Designed and developed 'Amrya,' a service robot, and took a leadership role in overseeing the entire software architecture and implementation. The project was successfully showcased at major conferences and seminars, including those at NESCO, Mumbai and Grand Hyatt, Mumbai.
 - Applied hands-on programming expertise in Arduino to develop and implement projects such as obstacle avoidance systems utilizing Ultrasonic and IR sensors, showcasing practical problem-solving and hardware integration skills.

ACADEMIC PROJECTS AND RESEARCH PAPERS

- **Virtual Labs**
 - Developed and deployed virtual lab simulations for schools across India, enabling over 2 million students to perform lab experiments remotely, bridging the gap where physical labs are unavailable.
 - Designed and implemented the front-end of the application using ReactJS, enhancing user engagement with interactive animations powered by Rive.
 - The project is included as part of CDAC and is hosted under the Vidyakash Portal, URL for open access.
- **Automated API and Database Management**
 - Devised a new system where developers can build an automated backend system, using ReactJS and NodeJS.
 - Ensured the security of user data using tools and techniques such as JWT-based authentication, format string vulnerability checking at every point, and API Rate Limiters to avoid DDoS attacks.
 - Authored and published a paper on the same system in International Journal for Research In Applied Science and Engineering Technology, DOI: 10.22214/ijraset.2022.41827.
- **Dynamic Word Embeddings for compression of deep learning models**
 - Employed a custom rolling hash algorithm to compress word embeddings by up to 94% without compromising model accuracy. Optimized for deployment on resource-constrained platforms such as mobile devices.
 - Leverages Python, Pandas, NumPy, and PyTorch for implementation.
- **A Novel Approach to Sorting Algorithm**
 - Created a new sorting algorithm that could sort items in $O(n)$ time complexity and utilized the technique of sorting based on weights to sort the elements.
 - Authored a paper on the same, which was accepted by the conference, "ANTIC – 2021", and published in CRC Press's (Taylor and Francis Group) book titled, "Research Advances in Network Technologies."

TECHNICAL SKILLS

- **Languages and Databases:** Java, JavaScript, HTML & CSS, SQL, NoSQL, C++, C#, Python, R, Swift, TypeScript, PGVector.
- **Mobile, Web, and Desktop Frameworks:** Flutter, ReactJS, NodeJS, ExpressJS, NextJS, Django, JavaFX, Bootstrap, MaterializeCSS, Tailwind CSS, Angular, jQuery, iOS, AJAX, Flask, MaterialUI.
- **Software and Tools:** Git, GitHub, Firebase, MySQL, VSCode, Android Studio, Jupyter Notebook, AWS DynamoDB, AWS Amplify, AWS Elastic Beanstalk, AWS Route 53, REST Architecture.

ACHIEVEMENTS & EXTRACURRICULAR ACTIVITIES

- Served as a Technical Coordinator at Google Developers Student Club, DJSCE and as a Secretary at DJCSI from 2019 to 2021.
- Publish blogs on Technology and Development on Medium.com to contribute to the open-source community since Oct 2020.