SHUBHAM RAJRAH

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EDUCATION

University of Southern California   Los Angeles, CA
Master of Science in Computer Science – GPA: 3.88/4   January 2023-December 2024
Relevant Coursework: Analysis of Algorithms, Database Systems, Machine Learning, Computer Graphics, Applied NLP,
Information Retrieval & Web Search Engines, Game Development

SRM Institute of Science and Technology   Delhi, India
Bachelor of Technology in Computer Science and Engineering - GPA: 9.30/10   May 2016-May 2020
Relevant Coursework: Data Structures and Algorithms, Discrete Mathematics, Machine learning, Computer Networks

TECHNICAL SKILLS

- Technical Skills: Data Structures and Algorithms, Microservices, API Design, Git, GitHub, JUnit, JDKs, OpenShift, Docker, Kubernetes, Azure, AWS, Jenkins, CI/CD, Game Dev (Unity - C#, WebGL), Graphics (OpenGL), Robot Test Framework, Jasmine
- Programming Languages: Python, Java, C, C++, JavaScript, HTML, CSS, SQL, PLSQL, Scala
- Full Stack Dev: React, Angular, Node, Flask, Spring Boot, MongoDB, PostgreSQL, MySQL, Firebase, REST APIs, Mobile (Swift)
- Machine Learning: Vector Search, HNSW, LLMs, CNN, PyTorch, TensorFlow, Keras, scikit-learn

WORK EXPERIENCE

Airy   Los Angeles, CA
Technical Lead (Web Platform)   June 2024-Present
- Led the system design and development of Airy's AI journaling web platform, utilizing React, IndexedDB, and OAuth2.0, enabling real-time conversational sessions with an AI therapist via the OpenAI API.
- Implemented vector search using HSNW for fetching user memories (journal entries) related to a particular context
- Directed a team of developers, managing sprint planning and task delegation, while translating complex functional and non-functional requirements into actionable development tasks to deliver a seamless user experience.

USC Viterbi Marketing and Communications Office   Los Angeles, CA
Web Development Student Worker   May 2023-Present
- Specialize in website creation, maintenance, and issue resolution for USC Viterbi School of Engineering, while also providing expertise in staff training, project management, and data research review

Optum (UnitedHealth Group)   Chennai, India
Software Engineer, Core Development Team   January 2020-December 2022
- Developed and maintained an online portal to enroll healthcare providers and state agents in the US as a full stack developer
- Collaborated in a team of 4 to Improve code quality by analyzing and fixing high priority defects
- Maintained and optimized a data pipeline to Extract, Transform, Validate, and Load large-scale member health data for downstream consumption leveraging PLSQL, Java, python, DevOps, reducing runtime by 81%
- Developed and deployed a test data generation tool that cut manual preparation time by 50% and authored comprehensive end-to-end test suites, resulting in a 25% faster time-to-market for software delivery.
- Optimized cloud data pipeline by 30%, based on Apache Spark for handling large-scale data for insurance and claim adjudication

Pro Ace International   Remote, US
Full Stack Developer   January 2019-January 2020
- Conceptualized and established an online platform called UnderdogIdols for budding Singers & Performers along with functionality to upload videos with voting features by registered users
- Devised an algorithm to match performers with music label companies, improving matching efficiency by 90%

ACADEMIC PROJECTS

covid19-social.com | Python, Flask, HTML, CSS, JS
- Designed and deployed a website during Covid to help users find Covid-19 resources such as oxygen cylinders, beds etc.
- Devised an algorithm to match social media feeds with user requirements using various APIs

Vaccination Slot Booking for Covid-19 | Python, Flask, MySQL
- Created a service for users to register for the Covid-19 vaccination slot booking notification by consuming an API endpoint periodically to check for free slots, serving each user in a non-discriminatory fashion

Recommending Reusing DIY Ideas using Waste Recognition
- Collaborated in a team of 2 to build a real-time waste object recognition system using Convolutional Neural Networks with transfer learning model ResNet-50 with a validation accuracy of 87.48% (Research Paper in IEEE Access - link)

LEADERSHIP AND INVOLVEMENT

- Scholar at USC Asian Pacific Alumni Association (APAA)
- Awarded the Sapphire Award (professional ethics) and Diamond Award (technical innovation and leadership) at Optum
- Spearheaded a team of 5 called HealthCera as Team Leader at Optum Global Hackathon