

Rohan Baban Sonawane

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WORK EXPERIENCE

AI/VR Researcher & Software Engineer

Aug 2023 – May 2025

California State University Dominguez Hills

Carson, CA

- Designed and developed an immersive VR classroom using Unity (XR Toolkit, C#, OpenAI, Convai), increasing student engagement by 40% and receiving positive faculty feedback.
- Built LLM-powered NPC teachers with context-aware dialogue, improving knowledge retention by 50% through natural, human-like interaction.
- Produced high-fidelity 3D assets in Blender and developed the department's official website, enhancing digital presence and accessibility.
- Mentored 6 students in 3D sketching, Blender, Unity, and VR development, leading to projects such as a pendulum simulation, Tesla 3D model, and a VR cannon shooting game that won a special prize.

Software Development Engineer

Aug 2020 – Jul 2023

Self-Employed

Mumbai, India

- Built and deployed 15+ full-stack web applications using React.js, Node.js, PHP, and SQL, improving UI responsiveness and user satisfaction by 40%.
- Implemented CI/CD pipelines using GitHub Actions and Docker; refactored legacy systems to optimize performance, reducing load times by 50% and accelerating deployments.
- Developed custom WordPress templates, modules, and plugins including a petition system and a donation platform with recurring payments and Google Sheets integration enhancing functionality and automation.
- Oversaw the full SDLC for 7 client projects, from requirement analysis to delivery, cutting delivery times by 50% through workflow optimization.
- Consulted with clients to deliver tailored solutions, resulting in a 95% satisfaction rate and repeat business from 5 clients.

Software Development Engineer

Jun 2016 – Sep 2020

Briefcase Digital Communications Private Limited

Mumbai, India

- Directed a 5-member development team to deliver 60+ scalable web applications, accelerating project delivery by 60% and product reliability by 70%.
- Spearheaded Agile SDLC implementation by integrating Git-based version control, sprint planning, and test-driven/behavior-driven development (TDD/BDD), enhancing development velocity and release reliability.
- Revamped websites for performance, SEO, and security, achieving 70% faster load speeds, boosting organic traffic and 80% secured websites.
- Design and Developed custom WordPress, Magento, and Shopify themes and plugins for improved UI/UX, Performance and Security.
- Collaborated cross-functionally with marketing and UI/UX design teams to architect and implement optimized web application interfaces, leveraging Agile methodologies to accelerate project delivery timelines by 50%.

PROJECTS

Selective Content Hider - Chrome Extension Prototype | JavaScript, HTML5, CSS3, Chrome APIs

[Link](#)

- Designed and developed a Chrome extension for real-time hiding of website elements, enhancing user productivity and focus.
- Implemented drag-to-select UI, robust CSS selector logic, and page-specific rule storage using Chrome Storage API and Mutation Observer.

Portfolio Website | Next.js, React.js, Vercel, Cloudflare, GTM

[Link](#)

- Developed a modern, responsive portfolio website using Next.js and Tailwind CSS, showcasing projects and skills with an accessible UI.
- Enhanced UX by integrating Framer Motion for animations and Swiper for interactive carousels, demonstrating advanced front-end development skills.

Interactive Hate Map | Mapbox API, PHP, MySQL

[Link](#)

- Visualized hate crime data with clustering and filtering, supporting advocacy and research efforts.
- Built an optimized PHP backend with indexed MySQL queries for fast Mapbox data rendering.

Cryptocurrency VR Simulation | A-Frame, WebVR, JavaScript

[Link](#)

- Developed an immersive simulation of blockchain transaction flows for educational use cases.
- Integrated 3D interaction and wallet logic using WebVR and A-Frame; explored NFT visualization concepts.

Cancer Subtype Classification | Python, Deep Learning, Multi-Omics, XAI

[Link](#)

- Built a deep neural network to classify 6 cancer subtypes from integrated mRNA, miRNA, and SNV data, achieving 88.5% AUC and 78.2% accuracy.
- Applied KEGG pathway-based feature engineering and explainable AI (SHAP, Grad-CAM) to ensure model interpretability and biological relevance.

SKILLS

Programming: Python, Go, JavaScript, TypeScript, PHP, Java, C++, C#, .NET, SQL, HTML5, CSS3

Frameworks & Tools: React, Next.js, Angular, Flask, Django, Express.js, WordPress, Bootstrap, Tailwind CSS, Kajabi, Unity 3D, Blender

Cloud, DevOps & Data: AWS (EC2, S3, Lambda, RDS, Sagemaker), Google Cloud, Docker, Jenkins, Git, Vercel, Kubernetes, Terraform, MySQL, PostgreSQL, MongoDB, Redis, DynamoDB, Hadoop, Spark, ETL, Data Pipelines

AI/ML & Business: Machine Learning, Deep Learning, NLP, Computer Vision, TensorFlow, PyTorch, scikit-learn, OpenAI, Convai, Power BI, Microsoft Power Apps, Zapier, RestAPI, GraphQL, SEO, UI/UX Design, Agile, TDD, Web Security, Microservices, Automation

EDUCATION

California State University Dominguez Hills

Carson, CA

Master of Science in Computer Science, GPA: 3.75

Aug. 2023 – May 2025

- Relevant Coursework:** Data Structures & Algorithms, Computer Organization & Programming, Machine Learning, Artificial Intelligence, Object-Oriented Analysis & Design, Design and Analysis of Algorithms, Cloud Computing, Distributed Systems.
- Director of Student Services, CSUDH ASI** Developed and implemented inclusive programs in collaboration with campus departments, increasing student engagement and addressing student needs.