

SUSHRUTH RAO MURAKARE

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EDUCATION

Colorado School of Mines, Golden, Colorado
Master of Science in Computer Science, **GPA: 3.7**

Dec 2025

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python C++; **Web Technologies:** React.js, Next.js, Node.js, GraphQL, React Native, FastAPI, Flask, Zustand, Redux, TailwindCSS, Material UI, HTML5, CSS3.

Development Tools: Jira, Docker Desktop, PgAdmin, Apollo Playground, Agile, Figma, Android Studio, Git/GitHub version control. **Databases:** PostgreSQL, MySQL, MongoDB. **AI Tools:** Claude, GPT, Copilot

CERTIFICATIONS: AWS Cloud Practitioner, Responsive web design (freeCodeCamp), Practical web design & development (Udemy), HTML & CSS Certificate (Udemy), Intro to GenAI (Google cloud)

HACKATHONS: Blaster Hacks, Hop Hacks, Cal Hacks, Colorado Impact Hackathon.

EXPERIENCE

Software Engineer Intern, Zinnia, Boulder, Colorado (Full time) May 2025 – Aug 2025

- Integrated **generative AI (GPT-4)** into a production platform to summarize the tabular and chart data.
- Built responsive, accessible, and scalable real-time **data visualization dashboards** to track **user metrics** which include **charts, graphs and tables**.
- **Collaborated** cross-functionally with product, backend, and design teams while **representing** the frontend team and participated in **code reviews**, planning, technical discussions and estimating tickets.
- **Led** a team of **4 interns** as **Scrum Master** to design and deliver an on-time delivery metrics system using Agile methodology, **gathering requirements** from stakeholders through **collaboration** with team leaders, breaking them into actionable **JIRA** tasks, conducting daily stand-ups

Mobile App Developer, NutriverseAI, Boulder, Colorado (Part time) May 2025 – Aug 2025

- Built full-stack mobile applications using React Native, integrating **AI-driven audio** extraction from **social media** using **yt_dlp library** and **transcription** while operating in a **fast-paced startup** environment.
- Integrated AI-tool (**GPT**) to analyze user data and provide customized suggestions, motivational quotes based on their goals.
- Developed **Python** backend REST APIs with database integration for recipe data management, implementing **high quality code** and building automated content processing pipelines for production deployment.

Full stack Developer, Payne Institute, Golden, Colorado (Part time) Sep 2024 – May 2025

- Designed, Developed, Tested and Deployed full stack application independently collaborating with **non-engineers**, partnering with system admin to ensure smooth **deployments** using **Docker containerization**.
- Integrated an **AI chatbot** using **LangChain** and **Google Gemini** to analyze **satellite images** and **geospatial** data, enabling users to easily understand the data and **ask questions** through natural language.
- Built map layers using **MapLibre** to visualize data across different time periods, allowing users to **change map styles**, view **specific emitters**, and replace plain markers with **customized icons** for a **better user experience**.
- Developed **RESTful APIs** using **Node.js** to integrate with **PostgreSQL** and retrieve geospatial data, ensuring reliable access and maintaining the **backend**.
- Optimized **application performance** by fixing React re-renders, eliminating redundant API calls, and implementing improvements that reduced load times.

Senior Mobile App Developer, Tecnotree Convergence, Bangalore, India (Full time) Jan 2022 - Jul 2024

- Successfully implemented a bottom navigator to a **mobile app with React native**, making navigation **5x** faster.
- Implemented **Detox End-to-End testing** and eliminated the need for manual **QA**.
- **Led** development of a **5-screen component library**, enabling users to add services and earning a **team award**.
- Migrated **REST APIs** to **GraphQL** with **comprehensive documentation** and testing through API platform, eliminating redundant data and improving performance, **benefiting 5+ teams** and earning internal recognition.
- Developed **Java Spring Boot** microservices for telecom application, building RESTful APIs with MongoDB integration and implementing high quality code practices following **Agile** methodology.
- Received a '**Consistently Exceeds Expectations**' rating (5/5) and promotion after 8-month internship; ranked top 5 in Industry-Ready Training program.

Software Developer, Credental LLC, Lehi, Utah (Part time) Oct 2022 – Apr 2023

- Took complete **ownership** of the frontend for a startup, **Credental**, collaborating with the founders in Lehi, Utah.
- **Suggested improvements**, built and integrated **backend APIs**, and developed the **UI** for complete questionnaire flow, enabling seamless collaboration between dentists and healthcare insurance companies in the US.

Teaching Assistant, Colorado School of Mines, Golden, Colorado (Part time)

Aug 2025 – Dec 2025

- Mentor and guide students learning **Python** through regular office hours, teaching programming concepts and supporting assignment and exam preparation. Grade assignments and worksheets, providing feedback on code quality.

Teaching Assistant, Colorado School of Mines, Golden, Colorado (Part time)

Jan 2025 – May 2025

- Assisted the Mobile Application Development course, teaching **Kotlin** and **Jetpack Compose** to a class of 60 students during office hours, graded assignments and homework while providing student support.

RELEVANT PROJECTS

Geospatial Data Extraction

- **Designed and developed** a full-stack application to visualize the **Brushy Canyon Formation in Texas**, creating UI/UX designs in Figma, using **Mapbox** for map visualizations, structuring the **Supabase** database, and building **RESTful APIs** for data processing.
- **Led** a team of 3 engineers, responsible for initializing all the aspects of the application, breaking down requirements, assigning tasks, coordinating development.
- **Extracted and organized** 12 TB of geospatial data from a legacy server that had been maintained years earlier but was in a disorganized state and **migrated** the data to the **cloud**.
- Researched cloud platforms (**AWS, GCP, Azure**) and documented deployment architecture to support production hosting, storage, and scalability requirements.

AI-Powered Web Automation System Using Playwright

- Built autonomous browser automation tool using **Playwright** and **Google Gemini AI** that interprets natural language commands and executes multi-step web tasks by analyzing screenshots and HTML content at each stage.
- Implemented adaptive **decision-making loop** with configurable retry logic for **error recovery** and automated HTML report generation demonstrating production-ready agentic workflow design.

Access control system with masked face recognition (AI/ML)

- Developed an access control system using Python's face recognition library along with **TensorFlow, Keras, NumPy**, and Matplotlib to recognize faces even when partially covered, improving security for masked individuals.
- Evaluated machine learning models for mask detection, achieving **90%** accuracy with **VGG19** and **80%** with **MobileNetV2** and **ResNet50**. Implemented **MaskTheFace** script to detect facial features and apply masks to images.