Arav Saxena

AI Researcher | Full-Stack Developer | Machine Learning Engineer

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Professional Summary

AI enthusiast and full-stack developer with expertise in artificial intelligence and machine learning. Developed 7+ AI-powered applications, trained 11+ models, and secured finalist positions in national hackathons. Proficient in deep learning, NLP, and full-stack development, delivering innovative solutions for real-world challenges.

Education

- **12th Grade, Physics, Chemistry, Mathematics (PCM):** Ryan International School
  May 2021 – April 2023

- **B.Tech in Artificial Intelligence and Machine Learning:** Symbiosis Institute of Technology, Pune
  August 2023 – Present (Expected Graduation: May 2027)

Professional Experience

- **ArogyaMitra: AI-Powered Health Assistant**
  Developed a web application delivering multilingual health information to 500+ users via voice interaction, improving accessibility.
  Technologies: ReactJS, NextJS, NodeJS, Conversational AI, NLP, MongoDB, TensorFlow

- **BlueBoxAI: Automated SQL Query Generator**
  Built a BI tool generating SQL queries for sales dashboards, reducing reporting time by 30% for 10+ mock clients.
  Technologies: Python, NextJS, SQL, ReactJS, NLP, TensorFlow

- **ClarvisIntelliTutor: AI-Powered Study Assistant**
  Created an AI assistant generating 1,000+ practice questions for interview preparation, aiding 200+ students.
  Technologies: Python, NLP, MongoDB, Streamlit, TensorFlow

- **AgenticCV: AI-Powered Computer Vision Application**
  Designed a no-code platform for computer vision tasks, enabling 50+ users to build models without coding.
  Technologies: Streamlit, TensorFlow, Python, OpenCV

- **BharatiQues: Question Paper Generator**
  Developed an AI tool creating 100+ question papers from syllabi, streamlining content creation for 5+ institutions.
  Technologies: Python, Streamlit, NLP, TensorFlow

- **VitalSense: Contactless Vitals Monitoring System**
  Engineered an AI system for remote vitals monitoring, achieving 95% accuracy in signal processing trials.
  Technologies: Python, NextJS, MongoDB, ReactJS, TensorFlow

Technical Skills

- **Languages:** Python, Java, C++, JavaScript, TypeScript, HTML/CSS, SQL

- **Frameworks:** React.js, NextJS, TensorFlow, PyTorch, Flask, FastAPI

- **AI & ML:** Deep Learning, NLP, Computer Vision, LLMs, Generative AI, Reinforcement Learning, GANs, Diffusion Models, Agentic AI Frameworks, LangChain, LangGraph, AGNO, CrewAI, LLM Finetuning, LoRA, QLoRA, Finetuned LLM for Medical Reasoning

- **Databases:** MongoDB, PostgreSQL, MySQL, Convex

- **DevOps:** Git, Docker, CI/CD, Vercel, GitHub Actions

- **Tools:** VS Code, Jupyter, Postman, Git

Achievements

- **Finalist, SASTRA University Hackathon (October 2024)** – Developed a Generative AI solution, ranking top 5 among 50+ teams.

- **Finalist, National AI Hackathon at JSPM (August 2024)** – Built an AI mental health agent, serving 100+ mock users.

- **Grant Recipient, SASTRA University (July 2024)** – Awarded 10,000 for ArogyaMitra, funding 3-month development.

- **Published Research Papers (June 2024)** – Authored 2 papers in *Journal of Machine Learning Research*, cited 10+ times.

- **Open-Source Contributor (January 2024 − Present)** – Contributed to 3+ AI/ML libraries, impacting 1,000+ developers.

Publications

- Arav Saxena et al., "ArogyaMitra: A Voice to Voice Indian Multilingual Medical Assistant," *Journal of Machine Learning Research*, June 2024.

- Arav Saxena et al., "AgenticCV: A Text to Computer Vision Tasks Framework," *Journal of Machine Learning Research*, June 2024.