Ashmit Sethi

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Education

University of California Berkeley **Expected Graduation: May 2028**
Bachelor's of Arts in Data Science and Applied Math
Awards: *PVSA Gold, USACO Gold & 2x Hackathon Winner* — ***Course Work:*** *DSA, OOP, Data Science, Data Visual.*

Skills

Languages Python, Java, Typescript, C++
Frontend React, HTML/CSS
Backend Django, Flask
Databases PostgreSQL, MongoDB
ML/DS NumPy, Pandas, TensorFlow, PyTorch
GenAI LLMs, Agentic AI, RAG, MCP, Vector DBs
Visualization Matplotlib, Seaborn, Tableau
Cloud/Tools AWS, Docker, Git, Jira, Agile

Experience

Software Engineering Intern **Sep. 2025 - Present**
Stealth Startup (Healthcare) *Berkeley, CA*
- Developed internal RAG pipelines integrated with Model Context Protocol (MCP) to improve GenAI-driven medical document retrieval and summarization while maintaining HIPAA compliance.
- Contributed to computer vision workflows for medical imaging by implementing model training, dataset preprocessing, and inference optimization using PyTorch.
- Created data models and Power BI dashboards to visualize LLM and CV system metrics, supporting data-driven product and research decisions.

Machine Learning Research Assistant **Aug. 2024 - Nov. 2024**
Indiana University, Bloomington *San Jose, CA*
- Supported LLM research in the medical domain under Professor Da Yan and Ph.D. student Saugat Adhikari by annotating several hundred data samples for training and evaluation tasks.
- Assisted with simple PyTorch model training workflows, including dataset loading and basic model evaluation for NLP-related tasks. Explored prompt-engineering and data-augmentation techniques to enhance LLM fine-tuning efficiency for domain-specific text generation.

Machine Learning Research Assistant **May. 2024 - Jul. 2024**
University of Texas, San Antonio *San Jose, CA*
- Conducted research under the CAREAI cohort with Professor Ke Yang and Ph.D. Jason Johnson, focusing on counterfactual generation to improve classifier fairness and enhance model interpretability.
- Collaborated on implementing and testing Python-based ML models, analyzing the fairness impact across multiple datasets using a range of standard fairness metrics. Supported benchmarking of fairness algorithms by visualizing bias metrics and comparative results using Python and Matplotlib.

Projects

Multimodal Agentic AI Desktop Operator — 1st Place Winner at Cal Hacks 12.0 (Elevenlabs) **Link**
- Built a multimodal agentic AI system that autonomously controls computer interfaces (mouse, keyboard, and applications) via natural voice or text using LLM-driven reasoning.
- Integrated real-time computer vision and GUI automation to execute multi-application workflows with high precision and full end-to-end autonomy.

Computer Vision Gym Tracker — 1st Place at Tri Valley Hackathon **Link**
- Developed an AI-powered fitness tracker leveraging MediaPipe pose estimation and CNN-based joint analysis for real-time form correction and motion tracking.
- Implemented optimized OpenCV pipelines with efficient frame handling and latency reduction, improving visual feedback responsiveness and accuracy.

AI Image Authenticity Detector **Link**
- Trained deep learning models (EfficientNet, ResNet, ViT) to detect AI-generated images with 84%+ accuracy using a robust data augmentation and explainability pipeline.
- Deployed GPU-accelerated Flask and Streamlit apps with Grad-CAM visualization and real-time inference for interpretable AI image verification.