

Rohan Singh

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EDUCATION

University of California, Irvine

Expected Grad: **June 2027**

B.S. in Computer Science (GPA: 3.92) | Dean's Honor List (All Quarters)

Irvine, CA

Coursework: ML & Data Mining, AI, Information Retrieval, Data Structures & Algorithms, Operating Systems, Data Management **AI/CV:** RAG, Gemini Pro, PyTorch, YOLOv8, OpenCV, ByteTrack, BoT-FaceSORT, TensorFlow **Tools & Platforms:** Firebase, Vertex AI, Vercel, Docker, Android SDK, Git, GCP, AWS, Unit Testing **Certifications:** Google Cloud Generative AI Leader

EXPERIENCE

AI/Machine Learning Intern

June 2025 - Sept 2025

Imentiv AI

Cupertino, CA

- Boosted face detection and recognition accuracy by 6% via an automated ground-truth validation pipeline, directly optimizing production YOLO models
- Implemented a face re-identification mechanism using dynamic placeholders to maintain consistent tracking, validated against ByteTrack and BoT-FaceSORT
- Conducted comparative evaluations that influenced the engineering team's decision to migrate from legacy models to updated YOLO architectures

AI/Machine Learning Intern

June 2024 - Sept 2024

Imentiv AI

Cupertino, CA

- Engineered an image deduplication pipeline, using DINOv2 and Faiss to filter 95% similarity redundancies
- Developed an algorithm to identify and extract distinct video frames for dataset diversity
- Built a facial analysis tool using YOLOv8 to detect faces, create bounding boxes, and label emotions

Software Engineer Intern

June 2023 - Aug 2023

Asterbyte Software Systems Pvt Ltd

Remote

- Designed and implemented a machine learning solution for emotion detection on human faces in videos and images
- Engineered mobile application "Hue Christmas" for Philips Hue and reconstructed/optimized "Pitch Prime"
- Conducted research on emotion recognition and published findings at WCSET 2023 and IRAJ 2023

PROJECTS

Behavioral Interview Coach

December 2025

Python, FastAPI, Imentiv AI, Docker, AWS S3

- Architected a 'Soft-Skills First' analysis engine designed to quantify non-technical traits (confidence, eye contact, pacing), filling the critical feedback gap left by technical platforms like LeetCode
- Created a real-time interview simulation replicating high-pressure screenings in a low stakes environment
- Developed a computer vision pipeline that separates semantic content from delivery when evaluating performance

SikhAI

July 2025

Next.js, Firebase, Vertex AI, Tailwind CSS, Google Gemini

- Developed a RAG-based chatbot to provide spiritual guidance rooted in Sikh teachings
- Engineered a full-stack community platform featuring Firebase Authentication for a Seva volunteer event organizer
- Built an accessible, high-performance Shabad search engine for the Sikh community using Next.js

RESEARCH PUBLICATIONS

Shiwangi M, Shalu P, Rohan Singh, "Enhancing Face Emotion Recognition with FACS-Based Synthetic Dataset using Deep Learning Models", *8th International Conference on Computer Vision & Image Processing*, Nov 2023

Shalu P, Insha L, Rohan S., Shiwangi M., "Face Emotion Recognition with New Auto Generated Emotions Dataset: EMOTE-2023", *World Conference on Science Engineering and Technology (WCSET)*, Mar 2023; subsequently published in *Institute of Research and Journals (IRAJ)*