Satvik Panchal

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EDUCATION

M.S. Computer Science May 2025
Arizona State University, Tempe, AZ **3.9 GPA**
B.S. Computer Science May 2024
Arizona State University, Tempe, AZ **4.0 GPA**
Honors: Dean's List Spring 2021 – Spring 2024

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java, R, C#, SQL
Technologies & Frameworks: Apache (Kafka, Spark), Splunk, GitHub, JIRA, MySQL, PostgreSQL, REST APIs, Ubuntu, Pandas, TensorFlow, PyTorch, Scikit-learn, NumPy, Optuna, Docker, FastAPI, Flask, AWS (Lambda, SQS, EC2, ECR, CloudWatch, IoT Core)

PROFESSIONAL EXPERIENCE

Relma AI, Remote: Founder & AI Architect November 2025 – Present

- Building proprietary full stack **Computer Vision** + **LLM** context-understanding pipelines that interpret structure and semantics across **20+** enterprise dashboard companies, designed to improve intelligence in the analytics space.

MOOG Space and Defense, Gilbert, AZ: **Software Engineering Intern** May 2024 – April 2025

- Engineered an optimized end-to-end **SQL Server database** of flight-critical hardware components with a **Python Streamlit UI**, reducing retrieval time from **5 minutes** to **under 3 seconds** for engineers**.**
- Implemented rigorous **unit testing** in **C** for flight-critical software for **NASA's Artemis III** using the **Unity**/**CMock**, achieving **100% code coverage** and deployed onto **FPGA**-based dev kits to confirm functionality in real components.

Solisa AI (Startup), Chandler, AZ: **Machine Learning Engineering Intern** May 2024 – July 2024

- Built and trained a **Python TensorFlow** model on over **13K** data points, achieving an **AUC score** of **75%** while reducing false negatives using **DBSCAN** clustering and **NearMiss** undersampling.
- Automated hyperparameter tuning in **Python** with **Optuna** and **Neural Network Intelligence** on GPUs, improving **customer conversion prediction accuracy** by **7%**.

Astro Seed, Tempe, AZ: **Machine Learning Engineer Intern** August 2023 – May 2024

- Led a 5-person team to build and fine-tune a **Python TensorFlow ResNet50 CNN** for plant nutrient deficiency detection, achieving **97% accuracy** and boosting precision by **12%** through custom convolutional layers.
- Earned **2nd place** out of **130+** teams for delivering a **high-performing ML solution**.

Nike, Beaverton, OR: **Software Engineering Intern** June 2022 – Aug 2022

- Developed an audit tracking solution in **Splunk Cloud**, using advanced **SQL**, reducing manual audit work by **20%.**
- Built a **Splunk**-based health visualization dashboard for real-time system monitoring, reducing incident detection time.
- Developed a **Python sentiment analysis** script integrated with **Splunk** dashboards, enhancing system monitoring.

PERSONAL PROJECTS

AI-Powered Job Tracker July 2025 – Present

- Engineered an **AI job tracker** integrating **Gmail API** + **OAuth 2.0 (GCP)**, a **FastAPI backend**, and a **HTML/CSS/JS (Tailwind)** UI, with a dual-classifier pipeline (**Ollama SLMs**/**Gemini LLM**) with **custom prompts** for email parsing.

Jarvis AI Assistant July 2025 – Present

- Engineered a **voice-first AI assistant** integrating wake-word detection (**VOSK**), **Open AI's Whisper** transcription, **Edge-TTS** voice output, and **Gemini LLM** to drive autonomous reasoning and orchestrate multi-tool workflows.
- Built a **RAG powered memory + tool ecosystem** using **ChromaDB (all-MiniLM-L6-v2 embeddings)** for context-aware retrieval, real-time screen analysis, external API connectivity (weather, system operations), and seamless **UI**.

AWS AI-Powered Serverless Edge Face Recognition February 2025 – May 2025

- Architected an **edge AI pipeline** with **AWS IoT Greengrass** + **EC2** + **MQTT**, enabling real-time face detection (**MTCNN**) with **100% accuracy** and **0.77s average latency** on **100 test images**.
- Built a **cloud-to-edge ML inference system** with **AWS Lambda, SQS,** and **FaceNet**, adding a custom **Python autoscaler** that scaled **EC2 instances** to process **100 requests** in **96s** with **zero failures**.

EXTRACURRICULAR EXPERIENCE

Python Users Group, Tempe, AZ: President August 2022 – May 2024

- Led a **100+** member club, mentoring officers, streamlining, and organizing **Python workshops** (**50+ participants)** on topics such as ML, deep learning, data engineering, and cloud computing.

Arizona State University, Tempe, AZ: **Student Mentor** March 2024 – May 2025

- Mentored **300+ students** through events supporting academic success and career exploration (**SWE, AI, Data Science**).