

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

MOOG Space and Defense, Gilbert, AZ: Software Engineering Intern	May 2024 – April 2025
<ul style="list-style-type: none">Engineered an optimized SQL Server database of flight-critical hardware components with a Streamlit UI, reducing retrieval time from 5 minutes to under 3 seconds for engineers.Implemented rigorous unit testing in C for flight-critical software using the Unity and CMock, achieving 100% code coverage verified with gcov to ensure robust and reliable code quality.Deployed unit-tested code on FPGA-based dev kits, validating software functionality in flight component environment.	
Solisa AI (Startup), Chandler, AZ: Machine Learning Engineering Intern	May 2024 – July 2024
<ul style="list-style-type: none">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, improving customer conversion prediction accuracy by 7%.	
Astro Seed, Tempe, AZ: Machine Learning Engineer Intern	August 2023 – May 2024
<ul style="list-style-type: none">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 in a competitive project setting.	
Nike, Beaverton, OR: Software Engineering Intern	June 2022 – Aug 2022
<ul style="list-style-type: none">Developed an audit tracking solution in Splunk Cloud, writing advanced SQL queries to analyze asset metadata, improving audit efficiency and accuracy.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
<ul style="list-style-type: none">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.Achieved 92% accuracy and cut latency by 40% using adaptive batching, model warmup, and robust JSON parsing.	
Jarvis AI Assistant	July 2025 – Present
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">Mentored 300+ students through events supporting academic success and career exploration (SWE, AI, Data Science).	