

Parwiz Khan

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Education

University of California, San Diego

B.S Computer Science

Expected December 2026

- **Relevant Coursework:** Data Structures & Algorithms, Machine Learning, Operating Systems, Computer Networks, Advanced Mathematics (Linear Algebra, Differential Equations, Probabilities)

Technical Skills

Languages: Python • C++ • C • Java • JavaScript • Swift

Frameworks/Tools: Flask • React • Next.js • Ansible • Docker • Git • CI/CD • Bazel

Cloud Databases: Google Cloud Platform (GCP) • BigQuery • Firebase • AWS (EC2, S3) • Redis • Supabase • RESTful APIs

Machine Learning: TensorFlow • Keras • Scikit-learn • OpenCV • Google Colab

Testing DevOps: PyTest • JUnit • Cloud Build • Cloud Run • Kubernetes

Experience

Juniper Networks

Sunnyvale, CA

Software Engineer Intern: Network Automation

June 2025 – September 2025

- Built scalable automation tools in collaboration with the support team to reproduce real-time network issues in a controlled environment, improving incident response by 60%.
- Built network simulations to mimic device states and failure scenarios, enabling faster debugging without impacting production.
- Collaborated with support and engineering teams to improve internal tooling and CI workflows for faster issue resolution.

CAIDA, San Diego Supercomputer Center

UC San Diego

Network Infrastructure Engineer Intern

October 2025 – Present

- Contributing to federally funded Internet measurement research on topology, routing security, and data analysis.
- Developing and deploying network data collection and visualization tools in Python and C++.
- Collaborating with faculty researchers to automate large-scale dataset processing pipelines.

Tramona

Seattle, WA

Software Engineer Intern

December 2024 – March 2025

- Built a real-time customer support chat system with TypeScript and Next.js, enabling direct communication between customers and admins.
- Worked with frontend and backend teams to integrate Redis caching, reducing DB load by 40%.
- Implemented CI/CD pipelines on AWS, reducing deployment time from 1 hour to 15 minutes.

G&K Petroleum

Moraga, CA

Software Engineer Intern

January 2024 – June 2024

- Developed a custom POS system handling 5K+ transactions/day, reducing processing time by 40% and improving customer satisfaction.
- Led a team of 4 network engineering interns to implement a network security upgrade, including firewall implementation, configuration, and authored troubleshooting guides now referenced by 7 technicians.

Aethon

Concord, CA

Founder & Lead Developer (Independent Projects)

February 2023 – January 2024

- Built backend, mobile, and web apps for small clients; optimized site load times by 40%.

Projects

Wireless Network Anomaly Detection System

Python, Tensorflow, Wireshark, Docker

- Built a real-time anomaly detection system on 5GB+ of network logs, achieving 93% detection accuracy with hybrid ML models.
- Automated pipelines for ingestion, preprocessing, and inference, reducing manual effort by 80%, and deployed a Flask/Streamlit dashboard for real-time monitoring.

ChatCore: Custom Web Server

C, TCP/IP, Sockets

- Developed a high-performance web server in C with custom TCP/IP sockets and persistent storage optimized for concurrent requests.
- Ensured low-latency stability under multi-client load through robust memory management and error handling.

Zaruram: Smart Business Assistant

AWS S3, OAuth, TypeScript, Supabase

- Built a full-stack AI SaaS platform with TypeScript, Supabase, and AWS S3, serving 1K+ users and handling 10K+ files with scalable cloud storage. Delivered 99.9% auth uptime via Google OAuth + Redis session cache and reduced support tickets 25% with a user-facing runbook.

MedVision: Smart Medical Image Classifier

Python, TensorFlow, Keras, OpenCV, Flask, React, Firebase

- Achieved 92% F1 on pneumonia X-ray detection using TensorFlow with CV-based hyperparameter tuning and data augmentation. Deployed a full-stack web app (Flask + React) for real-time medical image uploads and AI-based classification.