

Sunim Acharya

Software Engineer

San Francisco, CA, United States | [LinkedIn](#) | [GitHub](#) | [Personal Website](#)

Software engineer with 5+ years shipping production systems across web, mobile, and ML pipelines. Builds type-safe research applications and deploys models from paper to code.

EXPERIENCE

Independent Software Engineer

Jun 2025 — Aug 2025

CVector Energy Corp

New York, United States

Shipped persona-driven digital twins for energy demand forecasting with supervisor-led LLMops infrastructure. Deployed streaming ETL and memory services with auto-scaling and load balancing. Led end-to-end shipment of 3 UI experiments and implemented type-safe validation using DSPy and Effect-TS for multi-modal system integrations.

Graduate Assistant / Researcher

Aug 2024 — May 2026

Florida Polytechnic University

Lakeland, FL

Developed ensemble QSPR models predicting PFAS-MP sorption on 3,816 compounds with $R^2 = 0.89$. Co-authored publications on hurricane property and crop loss forecasting. Built LLM and computer vision pipelines that boosted task success by 57% using reinforcement learning signals.

Software Engineer

Oct 2022 — Aug 2024

Prophet Town LLC

Oakland, California, United States

Onboarded 30+ on-demand bidders by directing frontend development for an auction marketplace across 10+ releases. Reduced alert-to-action latency in weather station monitoring through push notifications and WebSockets. Refactored offline-first data layer with conflict resolution and background sync, cutting errors by 60% across environments.

Software Engineering Consultant

Jan 2022 — Feb 2023

Core Software Integrated LLC

Lalitpur District, Nepal

Delivered 5 client projects end-to-end including BLE provisioning for smart locks and MQTT fleet management. Designed cross-platform offline-first data layer that cut field-sync failures by 40%. Set up CI/CD pipelines and component library, reducing per-project bootstrap time.

IT Consultant

Aug 2020 — Sep 2021

FiberKnot Digital

Kathmandu District, Nepal

- Guided team in planning, timelines, and technology stack decisions as Acting Tech. Consultant.
- Collaborated with Human Resource to develop training modules and streamline hiring processes.
- Ensured project deliverables like KPIs and CTAs met high quality standards across platforms.
- Optimized web performance by implementing SEO principles and A/B testing on landing pages.

Technologies:

- Next.js, React, ES2020 and Vercel
- GraphQL, Koa.js and Node.js
- Django, Python and Strapi
- PHP, Laravel, WordPress and Frontity
- Docker, Kubernetes and Digital Ocean

Junior Software Engineer

Sep 2019 — Mar 2022

Traktivity LLC

Nashville, Tennessee, United States

Orchestrated Google Play launches for multiple app versions and rapidly onboarded hundreds of users in the first week. Led JavaScript to TypeScript migration across legacy modules using RxJS, reducing runtime errors and improving maintainability. Reverse-engineered SMS and Meta APIs to streamline communication and boost user engagement metrics by 2x.

Software Engineer Intern

Jan 2019 — Oct 2019

Satyawati LLC

Kathmandu District, Nepal

- Updated UI/UX for VideoPasal using React/React-Native, enhancing user interaction and design.
- Collaborated with designers on Figma to refine website aesthetics and functionality.
- Implemented advanced state management techniques to secure data integrity and prevent leaks.
- Led the integration of an advertisement network, boosting app monetization for the freemium version.

Technologies:

- React, React-Native, Redux, Preact and Gatsby
- Figma and Illustrator
- Mapbox and Leaflet
- Storybook and QA/QC

Software Engineer Intern

Nov 2017 — Dec 2018

Core Software Integrated

Lalitpur District, Nepal

- Contributed to the development of a Facial Recognition based automated door lock system.
- Sourced and integrated IoT modules, enhancing device connectivity and functionality.
- Prepared and normalized datasets for facial feature extraction, improving recognition accuracy.
- Deployed Inception V3 API for reliable face data verification, bolstering system security.

Technologies:

- React Native, Swift, Python and Opencart
- Figma, InDesign and Photoshop
- Trello and Zoho Suite

EDUCATION

Florida Polytechnic University

Aug 2024 — May 2026

Master of Science - MS in Computer Science

GPA: 3.95. Innovation Grant Winner (Provost, 2025). GDG Founding Lead (Google, 2025). Reviewer for BIG & EMJ (2025).

Tribhuvan University

Nov 2015 — Sep 2019

Bachelor of Engineering - BE in Computer Engineering

- Worked on Research Paper titled 'Computer Vision-based Traffic Rule Breach Detection'
- Implemented Object Detection and Classification API to detect electronic components
- Established the open-source and OOA on conducted various workshops and seminar under KEC IT Club along with representing the club on various events and talks
- Initiated a research-oriented methodology by installing on-campus workstation for students
- As an acting president in 2019, with collaboration with various clubs of KEC, commenced Dristi2.0 - A national event representing students from a various engineering background
- Collaborated with the IT Section and Engineering Department to bridge the knowledge gained from institution and apply over career and profession

PROJECTS

Trial

Real Time Video Surveillance for Traffic Rule Breach Detection

Prep

Surf - Search - Study at the best university for you through the best university companion

Nazar

Real Time Electronic Component Classification and Identification

Multi-agent system for code generation with ensemble voting and hybrid reasoning, HERA: Hierarchical Ensemble Reasoning Agent

Designed a 3-layer Google ADK multi-agent system that mitigates correlated LLM errors through ensemble voting. Benchmarked a 32B model on a single L4 GPU. Integrated a hybrid Code World Model combining AST and neural components with GEPA gradient-free prompt optimizer across 14 tools.

Auction marketplace platform, Voltage Park

Marketplace for on-demand energy services requiring complex real-time bidding and user onboarding infrastructure.

Weather station monitoring and alert system, WeatherSTEM

Mobile app for monitoring weather stations with push notifications and real-time alerts, optimized for low-latency alert delivery.

BLE-provisioned smart lock system, Core Lock

Cross-platform smart lock provisioning system using BLE communication with offline-first data synchronization and conflict resolution.

Client security and compliance platform, Kolyde App

Enterprise security application requiring robust offline-first architecture and background synchronization.

User engagement and gamification platform, Traktivity

SMS and Meta API-driven communication platform with gamification systems for user retention and activity tracking.

CERTIFICATIONS

Merit based Assistantship, Florida Polytechnic University

Aug 2024

Outstanding Paper Presentation, Office of KEC Research and Publications (OKRP)

Nov 2019

Merit based Scholarship, Kathmandu Engineering College, Tribhuvan University

Mar 2018

Computer Vision Based Traffic Rule Breach Detection,

SKILLS

Large Language Model Operations (LLMOps) · Problem Solving · Easily Adaptable · Multi-agent Systems · Product Development · One On One · Management · Collaborative Leadership · Leadership · Networking · Research and Development (R&D) · Agile Methodologies · DSPy · Full-Stack Development · Artificial Intelligence (AI) · Docker · FastAPI · Jira · Sentry · Tailwind CSS · Xcode · Android Studio · Microsoft Visual Studio Code · Git · Redis · Google Cloud Platform (GCP) · Svelte · Next.js · Java · Swift (Programming Language) · Go (Programming Language) · Python (Programming Language) · Mobile Applications · Web Development · Project Management · Computer Vision · Digital Marketing · Machine Learning · User Experience (UX) · JavaScript · Node.js · React.js · React Native · GraphQL · Django · TensorFlow · HTML · Photoshop · Jupyter · TypeScript · C++ · Rust · SQL · LangChain · LiteLLM · Ollama · vLLM · SGLang · PyTorch · scikit-learn · Flask · Express · WebSockets · Pydantic · PyTest · React · Effect-TS · Zod · Jest · Playwright · AWS · MLflow · Terraform · GitHub Actions · PostgreSQL · MySQL · MongoDB · Elasticsearch · Qdrant · FAISS · Mem0 · RFCs