

# Alvin Poudel Sharma

Senior Software Engineer | Modem RF Integration | AI/ML | Linux Systems

✉ alvinpoudels@gmail.com | 📞 +1 903-744-8152 | 📍 San Diego, CA | 🌐 alvinpsharma.com.np | 📧 alvinps | 🌐 alvinps

## SKILLS

---

Languages: Python, Groovy, SQL, C++, C, C#, MATLAB, HTML, CSS

Linux Systems: Shell scripting, signals, file systems, profiling, system diagnostics, performance optimization

Frameworks & Libraries: Flask, Django, React, Node.js, RESTful APIs, FastAPI, jQuery

Machine Learning & AI: TensorFlow, PyTorch, Scikit-learn, OpenCV, Keras, NLTK, Pandas, NumPy, Transformers

Data & Cloud Platforms: AWS, Azure, GCP, Linux, ROS, Raspberry Pi

DevOps & Tools: Docker, Kubernetes, Git, GitHub, Jenkins, CI/CD Pipelines, Jira, Perforce, Heroku

Software Engineering Practices: Agile/Scrum, OOP, System Design & Architecture, API Development, Automation, Microservices, Unit & Integration Testing, Code Review & Continuous Delivery

## PROFESSIONAL EXPERIENCE (5+ years)

---

### Senior Software Engineer (Modem RF Software Integration)

(April 2022- Present)

#### Qualcomm Inc, San Diego, CA

- Managed version control and code delivery across multiple branches, proactively handling conflict management and debugging build failures to ensure stable integration pipelines.
- Built and deployed multiple Docker Flask app to Kubernetes, enabling automated scaling and resilient cloud-native operation.
- Developed Python tools for system diagnostics, telemetry, and node-level monitoring across large compute clusters
- Built scalable CI/CD pipelines (Jenkins) and containerized build environments, optimizing automation efficiency and **reducing execution time by 40%**.
- Designed logging, profiling, and analytics tools to support cross-team debugging and regression analysis
- Partnered cross-functionally with hardware, firmware, and data science teams to build ML-enabled diagnostic frameworks, applying pattern recognition and signal processing to enhance test coverage and **reduce regression defects by 25%**.
- Pioneered AI-assisted testing solutions to proactively predict failure modes and streamline regression cycles, laying the groundwork for autonomous validation systems at scale.

### Software Engineer (Consultant)

(July 2021- April 2022)

#### Manpower, San Diego, CA

- Created log-analysis frameworks and automated diagnostic scripts leveraging Linux system calls and device-level data streams.
- Enhanced distributed processing workflows using Bash automation, Pandas, and multi-process Python services.
- Developed and deployed data-processing and visualization pipelines using NumPy, Pandas, and Matplotlib, accelerating analysis workflows and enhancing decision-making for RF validation teams.

### Peer Leader/Educator (SI Leader and Tutor)

(August 2018- May 2021)

#### UTSI, The University of Texas at Arlington

- Led and facilitated structured review sessions for foundational and advanced CS courses, including AI, Machine Learning, Data Mining, Object-Oriented Programming, and Computer Vision, C, C++, Operating Systems, and compiler/architecture fundamentals.
- Mentored peers in applied ML techniques, teaching core algorithms (KNN, Decision Trees, SVM), OpenCV fundamentals, and principles of supervised vs. unsupervised learning, resulting in stronger conceptual understanding.

## EDUCATION

---

### Master of Science in Information Studies (Computer Science & Data Systems focus) (GPA: 3.95/4.0)

#### Trine University, Angola, IN, USA

May 2025

- Coursework: Advanced Databases, Network Management, Cloud Computing, Cybersecurity, Data Science & Big Data, Systems Engineering Analysis, Object Oriented Programming, Project Management.

### Bachelor of Science in Computer Science (GPA: 4.0/4.0)

#### The University of Texas at Arlington, Arlington, TX, USA

May 2021

- Dean's List: Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021
- Coursework: Algorithms & Data Structures, Software Development, Operating Systems, Databases, AI, Data Mining, Computer Networks & Architecture, Machine Learning, Information Security, Robotics, Computer Vision, Object-Oriented Programming.

## CERTIFICATIONS

---

### Deep Learning Specialization | DeepLearning.AI (Coursera) [Cred: [6GUwntLw](#)]

January 2026

- Comprehensive 5-course specialization covering Neural Networks, Deep Learning, Hyperparameter Tuning, Convolutional Neural Networks (CNNs), and Sequence Models.

## PERSONAL PROJECTS

---

**Autonomous UAV (Drone Delivery System):** Engineered a self-navigating drone leveraging Linux-based compute, DroneKit API, python OpenCV, and ArduPilot for autonomous target delivery and real-time obstacle avoidance. **Achieved 95% delivery accuracy** and earned **1st place at the 2021 Raytheon Drone Showcase**.

**Maverick Shell (Linux Shell Prototype):** Implemented a Bash-like shell in C with process control, command execution, and file system navigation capabilities, piping, forking, exec, signal handling, demonstrating low-level systems programming and OS-level process management.