Vikhyat Chauhan

201-616-6373 | vikhyatchauhan@vt.edu | linkedin.com/in/vikhyat-chauhan-183723169 | USA

Education

- **Virginia Polytechnic Institute and State University** — Blacksburg, VA
  Master of Science in Computer Engineering with Thesis; GPA: 4.00 — *Aug. 2024 – Present*
- **College of Engineering Roorkee, Uttarakhand Technical University** — Uttarakhand, India
  Bachelor of Engineering in Electrical and Electronics; Percentage: 77% (First Division) — *July. 2016 – Dec. 2020*

Experience

- **Virginia Polytechnic Institute and State University** — Virginia, USA
  AI/ML Software Engineer — *Nov 2024 - Present*
  - Delivered an NSF Funded UAV control stack combining learning-based perception with a deadline-aware planner (mixture-of-experts); reduced deadline misses by 80%, lowered zone violations by 23%, and kept median time within 2% of the fastest policy—validated via simulation and statistical analysis.
  - Developed a SAC-based controller with continuous control and reward shaping, leveraging GPU training, domain randomization, and ROS2 middleware; productionized with Docker, CI, and metrics/ablation tooling to validate robustness in constrained environments.
- **GE Healthcare** — Bangalore, IN
  Full Stack Software Engineer — *Mar 2022 - June 2024*
  - Delivered 20% faster MRI segmentation on a GE real-time MRI pipeline by integrating Medical Stitching with ViT/Swin transformers and end-to-end TensorRT optimization for clinical use.
  - Recognized with the GE Impact Award for reduced MRI deployment time by 80% by migrating a C++ monolith to Kubernetes microservices, enabling scalable, zero-downtime rollouts to PACS/RIS; shipped MRPasting and GE Edison–optimized models via Docker + CI/CD (Jenkins, Git, SonarCloud).
- **TNM Electronics** — Gurugram, IN
  Technical Product Manager — *Sep 2021 - Mar 2022*
  - Drove end-to-end delivery as PM/tech lead at a seed-stage startup—coordinated hardware, firmware, and cloud teams (plus vendors), aligned priorities, and unblocked dependencies to launch the AWS IoT platform on schedule (100+ devices, 1K+ events/day, 99.9% uptime)—highlighting a collaborative, customer-first approach.
  - Built a resilient IoT platform on AWS EC2 with 99.9% uptime, scaling to 100+ devices / 1K+ events per day via RabbitMQ, MongoDB, and a custom MQTT broker integrated with patented hardware.

Projects

- **RAG Resume Assistant** : Built an open-source LLM resume generator with JD ingestion, followed by GPT-based keyword extraction and alignment, and LaTeX PDF rendering; reduced manual edits by 80%, achieved ¡30s runtime per role, and enabled tracking of 50+ applications with structured logs.
- **SentinelML**: Enabled reliable, scalable ML serving at production scale—meeting strict SLOs with p99 ¡ 250 ms and safe, rapid releases via canary deploys with a Python auto-healer/automatic rollback. Built comprehensive observability (Prometheus/Grafana dashboards & alerts) and performance validation (k6 load tests).
- **Patent: 202111060973 - Intellectual Property India**: System and method for facilitating communication between slave and master microcontroller for home automation.

Technical Skills

Languages: Python, C++, Java, SQL, Bash, JavaScript
Frameworks: PyTorch, TensorFlow, FastAPI, Flask, React, Node.js, Kubernetes, ROS/Gazebo-PX4
Developer Tools: Git, Docker, Jenkins, SonarCloud, Prometheus, Grafana, k6, Google Cloud Platform, AWS EC2/S3
Libraries: NumPy, pandas, Scikit-learn, Hugging Face Transformers, ONNX Runtime, TensorRT, SHAP, Grad-CAM