

Adli Qanadilo

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SUMMARY

Computer Engineering graduate student specializing in machine learning, data-driven modeling, and intelligent software systems. Experienced in developing predictive models, AI-powered applications, and scalable data pipelines using Python, FastAPI, SQL, PySpark, and AWS. Applied machine learning, optimization, and computer vision techniques across robotics, reliability-focused analytics, and real-time engineering systems to support data-driven decision making.

EDUCATION

Virginia Tech

Aug 2022 - May 2026

Bachelor of Science, Computer Engineering, Machine Learning

- **Coursework:** Data Structures and Algorithms, Continuous and Discrete Time Systems, AC Analysis, AI and Engineering Applications, Digital Systems, Embedded Systems, Applied Software Design, Machine Learning, Computer Architecture, Digital Image Processing, Computer Vision, Senior Design

Virginia Tech

Jan 2026 - May 2027

Accelerated Master of Engineering, Computer Engineering

- **Coursework:** Real-Time Systems, Cyber-Physical Systems, Principles of Robotic Systems

Certifications

- Hugging Face AI Agents Course - Hugging Face | 2026 (In Progress): AI Agents, Large Language Models (LLMs), Prompt Engineering, Tool Calling, Agentic Workflows

WORK EXPERIENCE

AEM Corp | Data Engineering Internship

May 2024 - Jul 2024

- Collaborated in sprint ceremonies under the Scrum framework to enhance AWS database development solutions, improving the quality of US federal agency grants data by 30% using Python and leveraging analytical skills in a team of six.
- Transformed and validated 50,000+ records in PostgreSQL using Python and SQL, enabling downstream analytics and AI-driven decision support for federal grant programs.
- Automated continuous data deployment pipelines using Python, Pandas, PySpark, Jupyter Notebooks, git, and AWS services, reducing data update delays by 60%.

PROJECTS

Semi-Autonomous Robot - Senior Design Project | VT

Aug 2025 - Apr 2026

- Designed and implemented a semi-autonomous SLAM-based robotic system integrating multiple sensor data with sensor fusion techniques to enable real-time localization, mapping, and obstacle avoidance in dynamic environments
- Developed a full-stack robotics control platform with a Python FastAPI webserver and real-time web-based GUI, enabling bidirectional Wi-Fi communication, live telemetry streaming through WebSockets, and remote command execution.
- Presented system design, testing methodology, and performance results to industry experts at Senior Design Expo, and demonstrated the robot in a live booth setting to faculty and students, effectively communicating technical concepts and system capabilities to diverse audiences

Machine Learning Projects - ML coursework | VT

Aug 2025 - Dec 2025

- Developed a logistic regression classifier from scratch in Python using tools like NumPy to classify handwritten digits from the MNIST dataset, achieving strong training and testing performance through gradient-ascent optimization
- Built and tuned a neural network classifier using PyTorch for multi-class digit recognition, improving classification accuracy through iterative model evaluation and hyperparameter optimization.
- Designed a stock prediction pipeline combining social media sentiment and historical market data, engineering features and training scikit-learn models to evaluate predictive performance using F1 and AUC metrics.

Hand Gesture Recognition- Computer Vision Project | VT

Dec 2025

- Developed a real-time hand gesture recognition pipeline using MediaPipe and an SVM classifier to accurately identify hand gestures from live video streams.
- Engineered geometric landmark features from hand-tracking data and trained models on approximately 5,000 samples collected from self-generated and external datasets.
- Evaluated model performance using confusion matrices and classification metrics, achieving near-perfect gesture recognition accuracy and creating a scalable computer vision pipeline adaptable to real-time monitoring, automation, and intelligent control systems.

Q-Learning Agent for Tic Tac Toe - Data Structures and Algorithms Coursework | VT

Nov 2024 - Dec 2024

- Developed a reinforcement learning agent using tabular Q-learning to master Tic-Tac-Toe with no prior knowledge of game dynamics, training over thousands of episodes with an epsilon-decreasing exploration strategy.
- Used unordered maps to build a compact Q-table to represent 765 unique base game states, factoring in board orientations through rotations and reflections for efficient learning and generalization.
- Designed recursive reward propagation and state transitions, achieving a win rate of 96% against random opponents by optimizing state-action value updates with the Bellman equation.

Hackathon Projects | Georgia Tech AI-ATL Hackathon & Marriott CodeFest at VT

Oct 2024 - Nov 2025

- Collaborated in fast-paced hackathon teams to design and build AI-powered web platforms under limited time, using technologies such as Next.js, FastAPI, MongoDB, Django, React, Heroku, and Google Vertex AI.
- Contributed to full-stack development across two projects: a restaurant scheduling platform that used Google OR-Tools for constraint-based optimization to generate conflict-free staff schedules, and Guest360, an AI-powered guest management platform for hospitality operations.
- Adapted quickly to new tools and project requirements, working with teammates through Agile-style planning, GitHub collaboration, and rapid prototyping to deliver functional products within short development windows.

SKILLS

- **Technical Skills:** JavaScript, Python, C++, R, Scikit-learn, PyTorch, MediaPipe, TensorFlow, NumPy, Node.js, Next.js, TypeScript, Django, React, Heroku, Google OR-Tools, Power BI, AWS, GitHub, SolidWorks, MATLAB, AWS, Google Vertex AI Agent Engine, RESTful API, FastAPI, Microsoft 365, WebSockets, PostgreSQL, SQL, Adobe Illustrator
- **Soft Skills:** Fast learner with strong debugging and adaptation skills., Team-oriented, with experience leading and supporting projects., Open-minded and analytical problem-solver., Clear communicator across technical and management teams., Resilient and able to grow from feedback and mistakes.