

Anthony J. Cavero

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EXPERIENCE

JD Lewis Construction Management — IT Specialist

Richmond, VA · Jun 2026 – Present

- Saved 25+ staff-hours per month for a 3-entity general contractor by designing and shipping **ContractorAI**, a suite of 10+ AI agents covering warranty intake, invoice routing, and document generation that most employees now use as standard tooling.
- Automated warranty-claim intake, processing ~27 inbound claims monthly with zero manual data entry, by building a Google Apps Script pipeline on Google Cloud Platform that calls the Gemini REST API (LLM) to extract structured fields from unstructured emails into Google Sheets with deduplication.
- Cut the AP supervisor's monthly invoice processing from a full workday to under 15 minutes (~97%, 25–30 invoices, 3 entities) by building an AI-assisted routing workflow, now her standard process, that classifies each invoice through a Job → Bill-to → Vendor hierarchy and resolves vendor overlap across QuickBooks entities.

FIRST Robotics Competition, Team 1086 Blue Cheese — Programming & Controls · Drive Team

2024 – Present

- Built the team's GPU vision stack as 1 of 3 lead programmers for the 2026 season: Isaac ROS AprilTag detection on a Jetson Orin Nano with multi-tag SQPnP pose estimation streamed to the roboRIO over NetworkTables 4 for auto-alignment and live localization (C++, ROS 2, CUDA).
- Shipped BlueScout, an offline-first scouting and strategy platform with 5 user roles, QR data handoff, and a match predictor blending team data with The Blue Alliance and Statbotics (Next.js, React, TypeScript, PostgreSQL, Socket.IO).
- Wrote a real-time A* path planner over visibility graphs with dynamic obstacle avoidance and velocity-profiled trajectories for driver-assisted navigation (Java, WPILib).

Center for Information Technology, Deep Run High School — Project Lead

Glen Allen, VA · Jan 2026 – May 2026

- Delivered a full-stack blog platform (React, Node.js, PostgreSQL) ahead of schedule to an external client by leading an 8-person Scrum team through requirements gathering, sprint development, and migration to the client's on-premise servers.
- Remediated a broken access-control vulnerability (users able to edit other users' posts) and 2 functional defects by running a structured, 150+ user beta during the early-delivery buffer, then closed out with acceptance testing and full maintenance documentation.

RESEARCH & PROJECTS

Algorverse AI Research — Student Researcher

Jan 2026 – Present

- Co-authored "Probe Reliability Scores That Do Not Score Probes," a measurement-validity audit showing a standard intervention-based probe-reliability metric is probe-independent, saturated, and circular; under review at the Workshop on Actionable Interpretability, COLM 2026.
- Designed and ran the paper's benchmark of 5,400 probe trainings (6 LLM families, 3 tasks, 3 probe architectures, 20 seeds) with Hessian-spectrum diagnostics; code released at github.com/Antigro09/probeReliabilityScript (PyTorch, Hugging Face).

neetcode-gpt: GPT from Scratch — Python, PyTorch

github.com/Antigro09/neetcode-gpt

- Building a GPT from first principles, with neural-network foundations public (gradient descent, backpropagation, MLPs, activations, softmax, loss functions) and the transformer stack (attention, grouped-query attention, KV-cache, BPE tokenizer) in progress.

EDUCATION

Deep Run High School — Center for Information Technology (CIT)

Glen Allen, VA · Expected June 2027

Advanced Diploma track · GPA: 4.5 (weighted) · **Coursework:** AP Computer Science A, AP Calculus BC, AP Physics 1 · **Dual enrollment (Summer 2026):** Linear Algebra, Reynolds Community College · **Senior year:** Multivariable Calculus, Discrete Mathematics

AWARDS & AFFILIATIONS

Eagle Scout — planned and led a 14-volunteer community service project (2024) · **CyberPatriot** — Platinum Tier Semifinalist, 3-year competitor

TECHNICAL SKILLS

Languages: Python, Java, C++, TypeScript, JavaScript, C#, SQL

ML & AI: PyTorch, NumPy, Hugging Face Transformers, OpenCV, Gemini API, Claude API

Systems & Web: React, Next.js, Node.js, PostgreSQL, ROS 2, Docker, Linux, Git, Google Cloud Platform, Agile/Scrum