Harshit Murarka

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SUMMARY

Second-year Computer Science and Engineering student at VIT-AP University, interested in AI/ML and software development. Built two full-stack systems solo, a PayPal refund gateway that keeps prompt-injected AI agents from moving money and a hybrid movie recommender, and put an on-device YOLOv8 model on an ESP32 eye-screening prototype. Looking for internships.

EDUCATION

VIT-AP University Amaravati, Andhra Pradesh
Bachelor of Technology in Computer Science and Engineering **| CGPA: 8.98/10 (current)** *2025 - 2029 (Expected)*

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL, HTML, CSS
AI/ML and Data: Machine Learning, LLM agents, MCP, PyTorch, scikit-learn, pandas, NumPy, Polars, ONNX Runtime, TensorFlow Lite
Web and Backend: FastAPI, REST APIs, React, Next.js, SQLAlchemy, PostgreSQL, Firebase
Cloud and Tools: Git, CI/CD (GitHub Actions), Docker, Google Cloud Run, Render, Vercel, Supabase, pytest
Core CS: Data Structures and Algorithms, Object-Oriented Programming

PROJECTS

Wardlock: Secure PayPal Refunds for AI Support Agents Oct 2026 - Nov 2026
PayPal AI Hackathon 2026 | Solo project | Live: wardlock.onrender.com | Code: github.com/Harshit-Murarka/wardlock

- Built an MCP server that lets an LLM support agent issue PayPal refunds: its refund tool takes no amount or payment ID, only server-priced options, and a policy engine allows, holds or blocks each one.
- On 100 reviewed tickets (40 attacks), cut money lost to attacks from 448.99 USD (5 of 40) with PayPal's raw refund tool to 22.00 USD (1 of 40) with no honest refund wrongly blocked; a scripted attacker got 0 of 38 calls through.
- Made refunds idempotent with PayPal-Request-Id, reconciled signed webhooks, and wrote 620+ tests on SQLite and PostgreSQL, including concurrency and hostile inputs; deployed on Render.
  Tech: Python, FastAPI, MCP, PayPal REST APIs, SQLAlchemy, PostgreSQL, pytest, React, AG Grid, Render

H-Tech: Hybrid Movie Recommender System Jul 2026 - Sep 2026
Solo project | Live: htech.harshitmurarka.dev

- Built a hybrid recommender on MovieLens 25M, combining collaborative filtering (SVD, item-kNN) with content-based scoring (tag-genome, TF-IDF, embeddings), routing each request, cold-start users included, to the best signal.
- Served embeddings with ONNX Runtime and tokenizers instead of PyTorch, removing its runtime overhead from the API image.
- Deployed a Dockerized FastAPI backend on Google Cloud Run with PostgreSQL on Supabase, and a Next.js (TypeScript) frontend on Vercel with swipe-card onboarding and semantic search.
  Tech: Python, scikit-learn, ONNX Runtime, FastAPI, PostgreSQL, Next.js, TypeScript, Docker, Cloud Run, GitHub Actions

Smart Vision Screening Device Jul 2026 - Sep 2026
Engineering Clinics, VIT-AP | Team of 6 | Prototype ready | Faculty guide: Dr. Vasavi Sanikommu

- Wrote the C++ (Arduino) firmware for a low-cost eye-screening device for rural camps, running YOLOv8-Nano (INT8, ~1.8 MB) with TensorFlow Lite for Microcontrollers on the XIAO ESP32S3 Sense so screening works offline, then uploading results to Cloud Firestore.
- Built the doctor's dashboard in vanilla JavaScript on Firebase (Auth, Firestore, Security Rules, Hosting) with SVG charts, printable prescriptions, and English, Hindi and Telugu support.
  Tech: C++, Arduino, TensorFlow Lite for Microcontrollers, YOLOv8, ESP32-S3, JavaScript, Firebase, Node.js

LEADERSHIP AND ACTIVITIES

Technical Co-Lead, Technical Team Sep 2026 - Present
Team Next Nexus (TNN), VIT-AP University | Technical Team Member, Sep 2025 - Aug 2026

Event Coordinator, V-TAPP 2026 | *TNN at VIT-AP's annual technical fest* Sep 2026

- Ran the HackerRank Coding Challenge and Fintech Innovate Hackathon: onboarding, leaderboard, mentors, judging.