

ETHAN VILLALOVOZ

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Education

Georgia Institute of Technology, College of Computing	Jan 2026 - Dec 2027
Master of Science in Computer Science — Computational Perception and Robotics, GPA: 4.0/4.0	Atlanta, GA
Washington State University, Honors College	Aug 2021 - May 2025
Bachelor of Science in Computer Science — Minor in Mathematics, GPA: 3.94/4.0	Pullman, WA

- Senior Design Project: **Retrieval-Augmented Generation (RAG)** App Using Knowledge Graph and Vector Search
- Relevant Coursework: Artificial Intelligence, Machine Learning, Object-Oriented Programming, Probability & Statistics, Data Mining, Design & Analysis Algorithms, Optimization, Software Engineering, Data Structures, Linear Algebra

Technical Skills

Languages: Python, C/C++, SQL, JavaScript, TypeScript, HTML/CSS, C#, MATLAB, R, Haskell, Swift
Developer Tools: Git, GitHub, GitHub Actions, Docker, Bash, Conda, AWS, Postman, Jupyter, MLflow, DVC, MySQL
Libraries/Frameworks: React, Next.js, FastAPI, PyTorch, Pandas, LangChain, Hugging Face Transformers, OpenCV

Work Experience

Microsoft	Summer 2026
Incoming Software Engineer Intern	Redmond, WA
Meta & Major League Hacking	Jun 2025 - Sep 2025
Production Engineering Fellow	Remote
<ul style="list-style-type: none">Deployed a full-stack Flask portfolio app with Docker on a DigitalOcean VPS, enabling persistent deployment and ensuring 100% uptime after reboot through automated systemd services for stable production reliabilityIntegrated a MySQL database and configured Nginx reverse proxy with HTTPS and rate limiting, strengthening backend scalability, improving security, and enhancing reliability for secure production environmentsAutomated deployments with a CI/CD pipeline using GitHub Actions and Bash, cutting manual deployment time by 80% and ensuring every push was tested, containerized, and deployed for efficient production workflowsImplemented a comprehensive monitoring stack with Prometheus, Grafana, and Linux CLI tools, uncovering bottlenecks under load and optimizing resource allocation for consistent scalability and system performance	
Carnegie Mellon University	Jun 2024 - Aug 2024
Robotics Institute Summer Scholar	Pittsburgh, PA
<ul style="list-style-type: none">Developed a novel hierarchical reward learning framework using Bayesian inference to align robotic actions with human preferences from iterative state corrections, significantly enhancing robot adaptabilityImplemented a proactive clarification dialogue system that improved task accuracy by 30% by resolving uncertainty through targeted human queries, reducing errors and advancing interactive human-robot collaborationEngineered a modular, extensible Python-based simulation environment using Markov Decision Processes (MDP), supporting robust evaluation and iterative development of learning algorithms in simulated robotics tasks	

Google	May 2023 - Aug 2023
Software Engineering Intern (STEP)	Sunnyvale, CA
<ul style="list-style-type: none">Developed and deployed 5 C++ and SQL-based analytics jobs for internal database queue metrics, significantly reducing operational costs and enabling data-driven decision-making in collaboration with engineering stakeholdersOptimized data sampling strategies to scale job execution from 1% to 100% dataset coverage within 4 hours, achieving a 66% reduction in runtime and improving the scalability, accuracy, and efficiency of internal analytics workflowsBuilt interactive, real-time dashboards using HTML and SQL-based queries, delivering actionable insights to internal teams across engineering and operations, and enabling faster decision-making through intuitive visualizationsImplemented live-update statistical features on client dashboards with HTML and database-driven queries, enhancing stakeholder visibility into queue activity, reducing detection latency, and enabling more responsive system oversight	

Projects

SentiSync – Real-Time YouTube Sentiment Analysis	Tech Stack: Flask, React, MLflow, DVC, Docker, AWS
<ul style="list-style-type: none">Built a real-time sentiment analysis system with a Chrome Extension frontend and Flask API backend, enabling instant visualization of YouTube comment sentiment using a fine-tuned LightGBM model and TF-IDF features	
CodePrep.AI – AI Coding Interview Prep	Tech Stack: React, FastAPI, Clerk, Hugging Face, SQLite
<ul style="list-style-type: none">Designed and deployed a full-stack platform for interactive coding interview prep that generates unique, difficulty-based challenges via Meta-Llama-3-8B-Instruct, with real-time feedback, quota tracking, and historical review	