Manas Navale

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Education

Texas A&M University College Station, TX
Bachelor of Science in Computer Engineering, Minor in Mathematics, GPA:3.7/4.0 *Aug. 2023 – May 2027*

Experience

App Security Intern June 2025 – Aug 2025
AIG — American International Group *Houston, TX*

- Automated AppSec workflows with Python, Bash, and Azure, reducing manual workload by 30% and accelerating DevSecOps processes.
- Performed penetration tests on 15 applications using Burp Suite, OWASP ZAP, and Nmap, uncovering critical vulnerabilities and supporting remediation to reduce risk exposure.
- Supported post-test remediation activities, documenting mitigation steps, advising on secure configuration changes, and performing verification testing.
- Collaborated on LLM security use cases, evaluating AI-driven tools and risk mitigation strategies to strengthen application security posture.
- Supported 100+ employees with troubleshooting and onboarding for internal applications, ensuring smooth day-to-day operations and minimizing downtime

Machine Learning Research Assistant March 2023 – Feb 2024
Texas A&M University *College Station, TX*

- Developed a novel path planning algorithm by integrating deep learning (PyTorch) with graph theory, enabling drones to navigate cluttered environments with improved efficiency
- Utilized onboard sensor data (LiDAR, IMU, GPS) to train and refine trajectory models, enhancing real-time decision-making and reducing collision risk.

Computational Neuroscience Research Assistant Sept 2021 – Apr 2023
University of North Texas *Denton, TX*

- Designed and developed a VR grocery store environment in Unity (C#), enabling immersive simulations for cognitive neuroscience research.
- Built experimental workflows with Pydra for preprocessing and managing large-scale fMRI and EEG datasets, streamlining data pipelines for analysis and model training.
- Integrated neuroimaging data with VR interaction metrics, enabling multi-modal analysis of cognitive engagement and supporting dementia-focused research outcomes.

Projects

Vagabond – Real-Time AI Incident Copilot | *Cloudflare Workers, Wrangler, React, Vite* Jan 2026 – Present

- Built a real-time AI incident copilot that enables teams to collaborate during incidents and generate structured incident artifacts.
- Integrated a React, Vite frontend with Cloudflare Workers API and Durable Objects to create a stateful edge system.

BirdBook (TAMU Hackathon Winner) | *TypeScript, Next.js, Flask, Jinja2, SQLite, PyTorch* Oct. 2025

- Built a web application that identifies bird species from user-uploaded images using a computer vision model.
- Implemented a Flask-based API for image ingestion, model inference, and species metadata retrieval.

Cloudy | *Amazon ECR, Amazon ECS, Docker, Terraform, Python* Dec 2024 – Jan 2025

- Provisioned AWS ECS infrastructure with Terraform to run Dockerized Python services using Amazon ECR.
- Deployed and updated services by registering new ECS task definitions with built-in health checks.

Technical Skills

Languages: Python, C++, C#, R, TypeScript, SQL, Dart, Bash, Rust
Frameworks: React, Flutter, Bun, Next.js, Node.js, Flask, TensorFlow, PyTorch, Unity, UE5, OpenCV
Developer Tools: Git, Docker, Terraform, AWS, Firebase, Cloudflare Workers, Godot, MongoDB, Visual Studio
Security Tooling: Metasploit, Burp Suite, OWASP ZAP, Nikto, WPScan, DIRB, Sysinternals Suite, PowerShell, Linux CLI, Nmap, Browser DevTools