

Amritaraj Nair

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EDUCATION

Texas A&M University

B.S. Computer Science Honors
Minor in Business in AI (Mays School of Business)
Minor in Statistics (College of Arts and Sciences)
President's Endowed Scholar

College Station, TX
Expected May 2029

Relevant Coursework: Data Structures & Algorithms, C++ Design, Discrete Structures, Engineering Calculus III, Python Programming

EXPERIENCE

Artificial Intelligence Modeling for Livestock Systems Research

Texas A&M University

Aug 2025 – Present
College Station, TX

- Applied agent-based modeling (**Mesa**) and machine learning to optimize livestock nutrition under economic and environmental constraints.
- Migrated legacy **R** workflows to Python to improve reproducibility, performance, and integration.
- Built simulation models in **Python, Java, and NetLogo** to evaluate sustainability and production outcomes.

Cybersecurity and Large Language Models Research

Texas A&M University

Aug 2025 – Present
College Station, TX

- Evaluated automated Cyber Reasoning Systems powered by **LLMs**, including Theori RoboDuck and TAMU AYNIAFB.
- Benchmarked vulnerability detection across real-world **C, Python, and Java** repositories.
- Analyzed CRS effectiveness across heterogeneous software systems.

Maroon Fund — Scholars of Finance

Quantitative Developer

Feb 2025 – Present
College Station, TX

- Building **quantitative models and screening frameworks** to support equity research and investment decisions across a **\$70,000 AUM** student-managed fund.
- Developing **data pipelines and valuation tools** using professional financial databases and market data to enhance the **investment committee's** analytical capabilities.
- Collaborating with portfolio teams to automate **research workflows** and deliver data-driven insights for **thesis-driven stock pitch** processes.

Aggies in Tech

Member

Oct 2025 – Present
College Station, TX

- Selected as **1 of 40** students across engineering and business colleges.
- Completing applied projects integrating software engineering and business strategy. Collaborating in small team settings to produce and pitch these products to the real world market.
- Direct mentorship and advice from Fortune 500 business and technology leaders. Earning Business of Technology Certificate.

PROJECTS

FinSeek

TamuHack

Jan 2026
College Station, TX

- Built a fraud detection pipeline using **Logistic Regression, Isolation Forest, and LightGBM** on synthetic transaction data.
- Developed financial risk forecasts using **Monte Carlo simulations (10,000 runs)** and time-series models.
- Implemented ensemble weighting via **R²** metrics to improve prediction accuracy.

Harbor

Lead Developer — 2026 TidalTAMU Google Gemini Track 1st Place Winner

Feb 2026 – Present
College Station, TX

- Built an assistive AI platform using **Gemini Flash 3.0** with a real-time chatbot, integrating **Mapbox API** and **ElevenLabs** to deliver location-aware, low-latency, voice-enhanced user experiences.
- Leveraged **NASA EOSEM** datasets spanning **70+ years of global weather data** to power predictive models estimating natural disaster risk for travel and long-term planning.
- Integrated **Google Cloud services** and an optimized **Google News API** pipeline to surface urgency-based, location-specific disaster and weather news, improving user relevance and decision-making.

ClinicalHours

Lead Engineer and Director of Operations

Dec 2025 – Present
College Station, TX

- Integrated **MapBox, Google APIs, and Resend API** for geolocation and automation. Scraped and processed U.S. hospital datasets in Python for accurate integration into production systems.
- Processed large-scale geospatial datasets in **Python**, converting JSON to cloud-ready CSVs.
- Planned, directed, and implemented new features such as map expansion, AI resume and application tools (With OpenAI and Gemini). Created a roadmap for funding.

TECHNICAL SKILLS & AWARDS

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

Frameworks/Libraries: React, Flask, FastAPI, Pandas, NumPy, Matplotlib

Tools: Git, GitHub, Docker, AWS EC2/IAM, Google Cloud, Supabase, Travis CI

Awards: 2026 TidalTAMU Google Gemini Track 1st Place Winner, President's Endowed Scholar, Google Labs Makeathon, FRC 4192 Impact Award, Gold President's Volunteer Service Award