

Dhruv Bhambhani

832-971-8937 | dhruvbhambhani@tamu.edu | [linkedin.com/in/dhruvbhambhani05](https://www.linkedin.com/in/dhruvbhambhani05) | dhruvbhambhani.vercel.app

EDUCATION

Texas A&M University

College Station, TX

B.S. in Mechatronics Engineering, Minor in AI in Business & Embedded Systems Integration Aug. 2024 – May 2028

- Major GPA: 3.82 | Dean's List Fall 2025

EXPERIENCE

Incoming R&D Software Engineering Intern

May 2026 – Present

Powell Industries

Houston, TX

- Developing an LLM-based expert system for electrical switchgear using Powell's internal technical library, enabling R&D team members to resolve SME-level queries without specialist escalation

Incoming Computational AI Researcher

April 2026 – Present

Design Innovation & Generative Intelligence (DIGIT) Lab | Texas A&M University

College Station, TX

- Conducting research on AI-driven generative design methodologies exploring how large language and generative models can autonomously solve complex engineering design problems across materials, structures, and machines

Incoming AI Security Researcher

April 2026 – Present

Secure Communication and Computer Systems (SUCCESS) Lab | Texas A&M University

College Station, TX

- Researching AI agent security vulnerabilities in multi-layer LLM frameworks to develop defenses against prompt injection, exec policy bypasses, and cross-layer exploitation chains.

Web Development Committee / AI Engineer

August 2025 – Present

Texas A&M University Robotics Team & Leadership Experience (TURTLE) | turtlerobotics.org

College Station, TX

- Increased member project engagement by 40% by developing an AI-powered onboarding chatbot using a fine-tuned Gemini LLM with RAG-style retrieval to intelligently match new members to relevant projects
- Reduced manual data management overhead for a 350+ member organization by building a full-stack platform using React and Supabase with a custom PostgreSQL schema, automated forms, and role-based data workflows
- Accelerated web presence and discoverability for a 350+ member robotics org by designing and maintaining a performant, responsive website, serving as the primary digital touchpoint for recruitment and sponsorship outreach

Co-Founder

September 2025 – Present

Pillar AI | pillarweb.vercel.app

College Station, TX

- Co-founded an AI automation startup delivering agentic AI systems for real estate
- Developed autonomous workflows that handle lead engagement, operational tasks, and decision support to increase agent efficiency and scalability

Software Engineering Intern

May 2024 – August 2024

JBB Asset Management LLC | jbbassetmanagement.com

Houston, TX

- Reduced manual data entry by 60% for 400+ unit portfolio by building full-stack web application with Supabase backend centralizing tenant and property records
- Accelerated client onboarding by 45% by automating end-to-end data ingestion pipeline into Supabase PostgreSQL database, cutting new tenant intake time
- Improved internal query resolution time by 50% by developing LLM-based tooling using Gemini API to surface answers directly from company documentation

PROJECTS

EDEN Robotics (Funded/Backed by AggieX) | [Website](#) | [GitHub](#)

January 2026 – Present

- Developed 6-layer distributed cognitive architecture for humanoid robot using ROS2, Ollama LLMs, and Jetson Nano, enabling real-time context-aware decision-making with <100ms response latency
- Built affective AI framework integrating Ollama-based reasoning with Supermemory for long-term memory, enabling adaptive human-robot interaction that personalizes responses based on user history and emotional context
- Integrated end-to-end CV, NLP, and motion planning pipeline validated in NVIDIA Isaac Sim using ROS-MCP, delivering cross-layer communication from perception to motion control for open-source humanoid robotics

TECHNICAL SKILLS

Languages & Frameworks: C++, Python, Java, C, HTML/CSS, SQL, React (Next.JS, Node.JS), Spring Boot

Developer Tools: AWS, Git, SOLIDWORKS (3D CAD), Arduino, MongoDB, Supabase, CLERK Auth, Ollama

Libraries: pandas, NumPy, Matplotlib, Machine Learning frameworks

Specializations: IoT Security, Embedded Systems, Full Stack Development, ML Implementation

Certifications: Texas Real Estate License – Licensed real estate professional in Commercial R.E. (180 hours coursework)