

Sai Peram

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[LinkedIn](#) • [GitHub](#) • [Portfolio](#)

Education

Bachelor of Science in Electrical and Computer Engineering

May 2027

The University of Texas at Austin, Austin, TX

GPA: 4.000

Relevant Coursework: Data Structures and Algorithms, Computer Science II, Electrical Network Analysis, Operating Systems, Calculus II/III, Differential Equations, Discrete Math, Linear Algebra, Physics: Mechanics & Electricity and Magnetism, Probability and Statistics

Software Skills

Programming Languages: Python, Java, C, C++, HTML, CSS, JavaScript, Dart, Swift, R, GoLang, SQL, C#, Haskell, TypeScript

Technical Skills: AWS (Connect, Lambda, S3, Bedrock, and Lex), Docker Containerization, Kubernetes, ROS (Robot Operating System), CUDA, cu-DNN, CARLA, Gazebo, Rviz2, Arduino, Google Big Query (Qwik Start, Datasets, Machine Learning), PyTorch, TensorFlow, MATLAB, Flutter SDK, Firebase, Office 365, Git, SimpleITK, NoSQL, NodeJS, Slack, Kotlin, Excel, Jenkins, PHP, CAD

Certifications: Microsoft Azure AI Fundamentals, Google AI Essentials, Mobile Application Development from The University of Waterloo, Java Programming and Intermediate Programming from The University of Waterloo, Agentic AI, IT Essentials from Cisco

Work and Research Experience

Surgical Robotics Researcher, Advanced Robotic Technologies for Surgery (ARTS) Lab, Texas Robotics August 2025 – Present

- ❖ Integrating **Franka Emika Panda Robot** workflows using **ROS2** and **Gazebo** simulations to optimize motion planning and control strategies for enhancing robotics in surgery
- ❖ Migrating legacy robotic control systems to modern, scalable platforms for researching real-time surgical control pipelines

AI/ML Engineer Intern, [Resolve Tech Solutions Inc.](#), Addison, TX

May 2025 – August 2025

- ❖ Developed a real-time call center support system that leverages **AWS cloud technologies (Connect, Lambda, S3, Athena, and QuickSight)** to effectively handle **20K+ IT operator interactions weekly**
- ❖ Improved incident resolution time by **20%** with **ServiceNow** integration into a **Streamlit** web application for call handling
- ❖ Integrated **Anthropic Claude 3.5 Sonnet** using **AWS Bedrock** for a conversational chat agent to reduce operator workloads

Autonomous Vehicle Engineer, NOVA: Self-Driving Research Lab, UT Dallas

August 2024 – May 2025

- ❖ Processed **LiDAR** and **RADAR sensor data** using **ROS2** for node-based communication and **Docker** for containerization
- ❖ Integrated computer vision models like **YOLOv8** for real-time vehicle brake light detection with **>85% accuracy** using **CUDA** and **cuDNN-optimized GPU training** on Linux based platform, **Ubuntu**
- ❖ Performed realistic simulations and algorithmic modelling in **CARLA** for training reinforcement learning driving agents

AI Project Lead, The Artificial Intelligence Society, UT Dallas

January 2025 – May 2025

- ❖ Led the development of an AI driven solution using deep learning models **U-Net**, **ResNet-50** and **MobileNetV2** with **reduced latency** for accurate diagnostics of eye diseases
 - ❖ Directed a cross-functional team to use **Tailwind CSS**, **React**, and **FastAPI** for creating a user-friendly web application that assists ophthalmologists with patient treatment methods
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Technical Projects and Leadership

AI Track Lead, Theta Tau Alpha

January 2025 – May 2025

- ❖ Trained **50+** students in AI, deep learning, data analytics and **Git** version control for adapting to industry standards

MedVisor: Medical Imaging AI Diagnostics Tool, The Artificial Intelligence Society, UT Dallas September 2024 – December 2024

- ❖ Used **PyTorch** and **TensorFlow** to train **ResNet-50** and **U-Net** models from **Keras** to diagnose lumbar spine degenerative conditions from MRI scans, earning **1st place recognition** by academic and industry professionals for contributions in medical image analysis

President, UTDesign Makerspace

May 2024 – May 2025

- ❖ Organized 3-month robotics and engineering workshops, engaging **100+** undergraduate students in STEM

Turtlesim: Dynamic Robotic Simulation

May 2024 – August 2024

- ❖ Developed a robotics control simulation with cursor-tracking and reactive behavior switching between multiple agents, researching reinforcement learning techniques using **ROS2** and simulating in **Rviz2**