Pranav Putta

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EDUCATION

Purdue University, West Lafayette IN Expected Graduation: May 2027
Bachelor of Engineering in Computer Engineering | Minor: Business Economics
Relevant Coursework: Data Structures, Algorithms, Software Engineering, Deep Learning, Electrical Engineering, IC Design

SKILLS

Software: Python · Java · Javascript · HTML · PHP · C · C++ · SQL · AWS · Git · Bash · MATLAB · TensorFlow · CSS

WORK EXPERIENCE

Undergraduate AI/ML Researcher - Purdue University October 2023 - Present

- Working with Professor Xiaokang Qiu and PhD students to research program synthesis with 2+ OpenAI API models
- Used Excel/SL databases, Marko Python parser, Python/server-side scripting (300+ lines), and prompt engineering to compare data analysis among LLMs and humans, measuring the capability of GPT in real-world applications
- Built algorithm to improve comparative performance by around 80% for 10,250 test cases per program execution
- Gathering and organizing data through graphs and statistics with pandas in a research paper for publication

Software Engineer - ECELabs.io May 2025 - Present

- Used Python, Javascript, CherryPy to develop full-stack protocols for online FPGA tool to simulate lab experiments
- Adopted by industry leaders (AMD, Xilinx, Purdue, etc.) for professional workshops and summer/college courses
- Revamped diagram page with 2400+ monthly visits and debugged server issues during downtimes
- Enhanced UI/UX with AlphaJS and refactored/tested code to maintain quality and robustness (1000+ lines)

LEADERSHIP

Software/Electrical Captain - Boiler Robotics August 2023 - Present

- Leading electrical and software teams of 20+ students to build/program an autonomous (RTOS) rover to compete in the University Rover Challenge - The Mars Society, placing 42nd overall internationally in 2025
- Applying telemetry for remote robot arm control, multimodal sensing/computer vision for autonomous navigation
- Using KiCad for PCB design and maintaining optimal BMS/wiring of embedded processors (Arduino Mega)
- Planning meetings to discuss goals and delegate tasks accordingly, allocating a $20,000+ budget

PROJECTS

PulmoAI September 2024

- Top 0.6% hackathon project that uses NVIDIA AI Workbench to help physicians diagnose/predict lung cancer
- Used PyTorch Densenet to train the model with 1000+ CT scans, reaching up to 98% accuracy in image detection
- Analyzed biometric dataset of 1000+ entries to achieve 98% accuracy with Random Forest Model from Sklearn
- Built health chatbot with LLM from Ollama and NVIDIA CUDA, integrated with Gradio app for a web interface

OrgoMap.org May 2025

- Developed chatbot, with React and Cloudflare, capable of solving complex image-generation o-chem problems
- Used FastAPI and vectorized 20000+ relevant JSON and SDF files with a RAG and prompt-based system, improving OpenAI GPT-4o factual consistency by 35%
- Utilized RDKit and 3DMol.js for 2D/3D SMILE and pushing diagrams, with image generation latency under ~5 s

Prepsify.com June 2025

- Created website that simulates mock live technical interviews with AI agent, deployed with Next.js and Vercel
- Built a RAG of embedded vectors of coding/behavioral questions with SentenceTransformers, LangChain, and FAISS, while leveraging OpenAI API for text and voice processing, recording <10% word error rate
- Provided an evaluation metric based on performance, increasing overall user confidence by ~40% after 3 sessions