Anirban Maity

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Professional Summary

Computer Science senior at Penn State with experience in **software engineering, AI/ML, robotics**, and scalable system development. Skilled in building intelligent platforms using **Python, ROS, Generative AI**, and full-stack tools. Strong foundation in **algorithms, simulation**, and applied machine learning. Seeking AI, robotics, or software engineering roles for 2025.

Technical Skills

Languages: Python, Java, C, C++, JavaScript

AI/ML Tools: Scikit-learn, Hugging Face Transformers, LangChain, OpenAI API, PromptLayer, TensorFlow

Web/Backend: Flask, MySQL, REST APIs, AWS RDS, Docker, Git, Linux, React

Robotics/Simulation: ROS, Gazebo, NetworkX, NumPy, Matplotlib, PyGame

Other: Algorithm Design, Generative AI, Large Language Models (LLM)

Education

Penn State University **Expected Dec. 2025**

Bachelor of Science in Computer Science — Minor in Computer Engineering ***GPA: 3.2*** *University Park, PA*

Professional Experience

Research Intern — AI & Robotics (PRM & RRT Navigation) **May 2025 — Present**

NIT Rourkela *India*

- Developed 2D hospital simulations comparing **PRM** and **RRT** algorithms for autonomous robot navigation.
- Reduced path length by **15%**, optimized planning efficiency, and modeled real-world access constraints.

Research Assistant — Generative AI Systems **May 2025 — Present**

Penn State University *University Park, PA*

- Built modular **Generative AI** platform using **LangChain**, OpenAI APIs, and custom prompt engineering.
- Conducted extensive **latency, reliability**, and **bias testing** for LLM tools in healthcare/education.

Full Stack Engineer — Threshold Platform (Capstone) **Jan 2025 — May 2025**

Penn State College of Engineering *University Park, PA*

- Developed backend for real-time physiological dashboard for first responders using **Google Pixel Watch** and **Mantis X3**.
- Ensured **HIPAA** and **GDPR** compliance, enabling secure health data handling.

Key Projects

Campus Enrollment Management System **2022**

Penn State University *University Park, PA*

- Designed a student enrollment system in **Java** with functionality for course add/drop operations, input validation, and efficient record management.

Diabetes Detection Platform **2025**

Penn State University *University Park, PA*

- Built ACT-R + Random Forest hybrid AI for medical diagnosis with fairness checks and interpretability.

Certifications

Microsoft AI Professional Program — Microsoft (2023)

Intro to Deep Learning — PowerAI (2023)