

Subham Dey

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EDUCATION

PES University

2023 – 2027

B.Tech in Computer Science and Engineering

Amara Jyothi Public School

2022

Class 12: 91% | Class 10: 92.8%

EXPERIENCE

Robotics Intern

Summer 2025

IEEE PES CRAIS LABS

- Simulated and performed gait analysis of quadruped robots (Spot, ANYmal).
- Migrated legacy ROS1 systems to ROS2, resolving compatibility issues in existing packages.

Data Analytics Intern

May – June 2025

Infotact Solutions

- Built a web data extraction and visualization app using APIs, BeautifulSoup, and Selenium.

PROJECTS

VLA Robotic Arm

Robotic manipulation system integrating vision-language-action models for task understanding via multimodal inputs.

Python, PyTorch, LLMs, Computer Vision

Quadruped Robot Simulation

Gait analysis and locomotion control of Spot and ANYmal robots with full ROS1 to ROS2 migration.

ROS/ROS2, Gazebo, C++, Python

3D Reconstruction via Gaussian Splatting

Generated 3D meshes of real-world objects enabling efficient scene reconstruction and visualization.

Python, Computer Vision

Digital Twin Space Suite Monitoring

Telemetry monitoring system using digital twin simulation for space suit bio-metric tracking.

Python, Docker, Bio-Gears, Simulation

TouchDesigner Sensor Art

Interactive real-time fire simulation driven by ESP32 sound and distance sensor inputs.

TouchDesigner, ESP32, Python

Inverted Pendulum Control

PID-based stability control system with simulation and response analysis under varying parameters.

Python, Control Systems, PID

SKILLS

Languages

Python, C/C++, TypeScript, JavaScript, Lua

Robotics & Simulation

ROS/ROS2, Gazebo, CoppeliaSim, MoveIt, OpenCV, Unity, CAD, Blender

Embedded Systems

Arduino, ESP32, FreeRTOS, QNX Architecture, Sensor Integration

AI & Machine Learning

PyTorch, TensorFlow, YOLO, SLAM, LLMs, Agentic AI

DevOps & Tools

Git, GitHub Actions, CI/CD, Docker, Linux, Android Studio