Abhijit Mukharjee

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Professional Summary

Engineering student specializing in robotics, embedded systems, and AI. Currently building AI-driven warehouse systems like autonomous mapping robots and smart wearables. Proficient in ROS, OpenCV, and embedded hardware. Boosted test throughput by 10% and minimized system downtime by 15%.

Education

B.Tech (GPA: 8.16/10), IIIT Bhubaneswar	*2022–2026*
ISC (96.5%), St. Joseph's High School	*2022*
ICSE (95.5%), St. Joseph's High School	*2020*

Skills

- **Robotics & Perception**: ROS, Jetson Nano, RealSense, SLAM, UWB, Human Radar
- **Computer Vision**: OpenCV, Object Detection, Real-Time Video Analysis
- **Embedded Systems**: Raspberry Pi, Arduino, Sensor Fusion, Edge AI
- **Warehouse Automation**: Smart Energy Systems, Navigation & Mapping
- **Programming**: Python, C++, Java
- **Automation & Control**: PLC, SCADA, Instrumentation
- **AI & ML**: TensorFlow/Keras, Agentic AI platforms
- **Electronics & IoT**: Microcontrollers, N8N, Embedded Systems
- **Soft Skills**: Leadership, Communication, Team Collaboration, Attention to Detail

Internships & Professional Experience

Neophyte Innovations, Remote/On-site *(Robotics & Embedded Systems Intern)*   *[Month] 2024 – Present*

- Engineered AR glasses for real-time warehouse navigation and object recognition with OpenCV & Jetson Nano.
- Integrated UWB sensors & human radar for sub-30cm indoor localization.
- Developed shelf inspection vision pipeline using RealSense, attaining >90% detection accuracy.
- Automated AC and lighting for dark stores; projected 25% energy savings.
- Coordinated embedded hardware with AI stack (Pi, MCUs) across cross-functional teams.

ONGC, Ahmedabad Asset *(Instrumentation & PLC Engineer Intern)*   *Apr 2024 – Jun 2024*

- Automated PLC diagnostic routines, decreasing downtime by 15% across 12 lines.
- Scripted SCADA data-logging tools that reduced report generation by 20%.
- Authored technical report endorsed by HR Cell, documenting networked instrumentation best practices.

Hindustan Aeronautics Ltd. (HAL), Sunabeda *(Engine Controller & PLC Intern)*   *Jun 2024 – Aug 2024*

- Created automated test suite for engine controllers, improving test throughput by 10%.
- Installed PLC-based safety interlocks, lowering manual intervention by 25%.
- Presented performance metrics to T&D Cell for optimization planning.

PyramidAI Hub, Remote *(AI & ML Intern)*   *Jan 2025 – Present*

- Deployed 3 agentic AI workflows, raising lead qualification efficiency by 25%.
- Trained and evaluated real estate prediction model with 88% accuracy.

Projects & Key Achievements

- **Neobot – Warehouse Robot**: Designed autonomous bot with SLAM, UWB, and ROS for mapping and shelf scanning.
- **Neophyte Smart Glasses**: Built AR wearable with object detection and radar-aided navigation for warehouses.
- **VAID Diagnosis Tool**: Led ML-based health assistant project; cut diagnostic error by 30%.
- **Image Classifier**: Developed Keras/OpenCV pipeline with 92% benchmark accuracy.
- **IoT Sensor Network**: Installed microcontroller network across 5 sites with 99% alert uptime.

Relevant Coursework

Digital Communication   Microprocessor & Interfacing   Control Systems   VLSI   IoT & Embedded   RF Engineering

Leadership & Extracurriculars

- Secretary, TARS, IIIT Bhubaneswar: Directed 5+ technical workshops, D3, and Advaita fests.
- AI/ML Engineer, VAID: Mentored juniors on model tuning and dataset engineering.
- Rajya Purashkar (Governor Award) recipient, Scouts and Guides.
- Junior Radio Artist (Keyboard), AIR 101 Cuttack.

Certifications & Languages

- HAL PLC & Engine Controller   ONGC SCADA & PLC Internship
- Google Cloud & AI Certificate
- English (Fluent), Hindi (Fluent), Bengali (Native), Odia (Native)