Abhijit Mukharjee

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Professional Summary

Engineering student specializing in robotics, embedded systems, and AI. Currently developing AI-driven warehouse solutions including autonomous mapping robots and wearable smart glasses (Neophyte). Skilled in ROS, OpenCV, and embedded hardware. Improved test throughput by 10% and reduced 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)*   *May 2025 – Present*
- Designed smart AR glasses for real-time warehouse navigation and object recognition using OpenCV & Jetson Nano.
- Integrated UWB sensors & human radar modules for indoor localization with <30cm accuracy.
- Developed vision pipeline for shelf inspection using RealSense; achieved >90% detection accuracy.
- Automated AC and lighting systems in dark stores; projected ∼25% energy savings.
- Coordinated embedded hardware with AI software stack (Pi, MCUs).

PyramidAI Hub, Remote *(AI & ML Intern)*   *Jan 2025 – April 2025*
- Deployed 3 agentic AI workflows, improving lead qualification by 25%.
- Helped train real estate agent model with 88% accuracy.

ONGC, Ahmedabad Asset *(Instrumentation & PLC Engineer Intern)*   *Apr 2024 – Jun 2024*
- Automated PLC checks, reducing downtime by 15% across 12 lines.
- Created SCADA logging scripts, cutting report time by 20%.
- Authored HR-approved technical report on instrumentation practices.

Hindustan Aeronautics Ltd. (HAL), Sunabeda *(Engine Controller & PLC Intern)*   *Jun 2024 – Aug 2024*
- Built automated test suite for engine controller, raising throughput 10%.
- Integrated PLC interlocks, cutting manual errors by 25%.
- Shared optimization data with T&D Cell.

Projects & Key Achievements

- **Neobot – Warehouse Robot**: SLAM-enabled Jetson Nano robot for shelf monitoring and mapping.
- **Neophyte Smart Glasses**: Wearable with depth sensing, object detection, and navigation via human radar.
- **VAID Diagnosis Tool**: Reduced diagnostic error rate by 30% via interactive ML pipeline.
- **Image Classifier**: Keras/OpenCV pipeline with 92% benchmark accuracy.
- **IoT Sensor Network**: 5-site MCU network, 99% uptime, real-time alerts.

Relevant Coursework

- Digital Communication
- Microprocessor & Interfacing
- Control Systems
- VLSI
- Microcontroller & IoT
- RF Engineering

Leadership & Extracurriculars

- Secretary, TARS, IIIT Bhubaneswar: Organized 5+ workshops and major tech events.
- AI/ML Engineer, VAID: Mentored junior team on ML model building.
- Rajya Purashkar (Governor Award), Scouts and Guides.
- Junior Keyboard Artist at AIR 101 (Cuttack).

Certifications & Languages

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