

PRADIPTA DOLAI

Biomedical Engineering Student | Biosensors & AI for Healthcare | Medical Data Analytics
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EDUCATION

Adamas University | Kolkata

2025 – 2029

B.Tech, Biomedical / Medical Engineering

CGPA: 7/10

- Completed a STTP on Frontiers of Biomedical Engineering focusing on Biosensors, Biomaterials, and Regenerative Medicine.

DBBV | Dhamtor, Paschim Medinipur

2023 – 2025

Higher Secondary Certificate (Science: Physics, Chemistry, Biology)

Grade: 84.36 percentile

EXPERIENCE

Robotics & Controls Engineering Intern

10th Oct 2026 – 16th Oct 2026

Johnson & Johnson MedTech (Forage Virtual Experience Program)

Remote

- Identified 50% excess response latency in a surgical robotic arm using Python, NumPy, and Jupyter.
- Modeled a 20% latency reduction (150ms → 120ms) through control system optimization.
- Evaluated 3 robotic commands and proposed optimizations targeting a 33% latency reduction.
- Wrote a technical diagnostic report with actionable recommendations to improve robotic precision and reliability.
- Technologies / Skills Used:** Robotic Systems, Robotics & Controls Engineering, Python, NumPy, Jupyter

Data Analytics & Forensic Technology Intern

Mar 2026 – Jun 2026

Deloitte (Forage Virtual Experience Program)

Remote, Australia

- Analyzed and classified datasets in Excel to identify trends and generate actionable business insights.
- Built an interactive Tableau dashboard visualizing 3+ key performance metrics.
- Applied forensic and analytical techniques to support data-driven decision-making.
- Technologies / Skills Used:** Forensic Technology, Data Analysis, Excel, Tableau

PROJECTS

OncoLens | [GitHub](#)

25th Oct 2026 – Present

AI/ML Developer

- Developed a research prototype for automated brain MRI classification into glioma, meningioma, pituitary, and no tumor, integrating **ResNet18** with **FastAPI** and a dashboard supporting **20 images per batch**, previews, and four-class scores.
- Implemented aspect-preserving preprocessing, RGB conversion, and ImageNet normalization; ensured upload validation and passing CI checks for dependencies, syntax, and application imports, with synthetic-image API verification.
- Documented unverified training metadata and dataset independence; accuracy for the published checkpoint is not established—recorded **88.29% candidate-model validation accuracy** cannot be attributed to it. Intended for research and education; not clinically validated. Private repository access requires authorization.
- Technologies / Tools Used:** Python, PyTorch, ResNet18, FastAPI, HTML/CSS/JavaScript

TECHNICAL SKILLS

Programming Languages: Python, C, MATLAB, HTML/CSS/JavaScript

AI & Machine Learning: Deep Learning (CNN), ResNet18 (Pre-trained Model), Machine Learning (basics), Generative AI, Prompt Engineering, AI Agents, AI for Healthcare

Biomedical & Engineering: Biosensors, Signal Processing, Medical Devices (ISO 13485), Electronic Control Systems, Digital Electronics

Frameworks & Libraries: NumPy, PyTorch, FastAPI

Tools & Platforms: Power BI, DAX, Microsoft Excel, Tableau

Soft Skills: Communication, Problem Solving, Technical Documentation, Analytical Thinking, Attention to Detail

Languages: Hindi, English, Bengali

CERTIFICATIONS

- Quality & Regulatory:** ISO 13485:2016 – Quality Management System for Medical Devices – SkillMed | Oct 2026
- Biomedical Sensors & Instrumentation:** Sensor Technologies for Biomedical Applications (Specialization); Sensors and Systems for Biomedical Applications; Fundamentals of Sensors – IISc | Jun 2026
- AI in Healthcare:** Healthcare Data Management, Security, and Compliance; Clinical Workflow Automation and AI Integration; Machine Learning and AI Applications in Healthcare – Microsoft | Jul 2026
- Agentic AI:** Oracle Certified Foundations Associate – Agentic AI – Oracle | Jul 2026
- Additional:** AI for Data Analysis – Google | Jul 2026; Python for Data Science – IBM | Jun 2026; Enterprise Design Thinking Practitioner – IBM | Jan 2026