



## DIBYENDU MONDAL

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## OBJECTIVE

Motivated and detail-oriented Electronics and Communication Engineering student with strong hands-on experience in embedded systems, PCB design, robotics, automation, and full-stack application development. Adept at integrating hardware and software to build functional prototypes, IoT solutions, and smart systems. Passionate about problem-solving, innovation, and continuous learning. Seeking opportunities to leverage my technical skills in electronics, embedded development, and software engineering within a dynamic engineering environment.

## TECHNICAL SKILLS

### Electronics & Hardware

- PCB Design & Circuit Design
- Embedded Systems: Arduino, Raspberry Pi, ESP Boards
- Sensor Integration & Microcontroller Programming
- SMPS & Amplifier Design
- PC Building, Computer Hardware & Software
- EV, Mobile & TV Repair (Certified)

- Adobe Photoshop, Premiere Pro, After Effects, Filmora, Krita
- Blender, Unity, Unreal Engine (Basics)

### Automation & Controls

- PLC (Programmable Logic Controller)
- Industrial Automation

### Operating Systems & Tools

- Windows 10/11, Linux (Basic)
- MS Office (Word, Excel, PowerPoint)

### Programming & Software

- Python, C, C++, (HTML, CSS, Java (Basic))
- Flutter (Dart), JavaScript (Basic)
- Machine Learning (Basic), AI Agents
- WordPress Development, UI/UX Design

## EDUCATION

### Bachelor of Technology (B.Tech) in Electronics & Communication Engineering

Swami Vivekanand Institute of Science and Technology (SVIST)

2022 – Present (Expected Graduation: 2026)

Status: Pursuing

### Higher Secondary (12th Grade)

Kotalpur Madhusudan High School — 2022

Grade: 81%

## Secondary (10th Grade)

Padmapukur Madhya Vidyalaya — 2020

Grade: 56%

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## PROJECTS

### Kiyo – AI Assistant Robot (*Group Project*)

Developed an interactive AI-powered personal assistant robot capable of voice recognition, query response, and basic task execution. Demonstrated integration of electronics, AI, and embedded systems.

**Technologies:** Arduino, Python, Speech Recognition, Sensors, Servo Motors

### Asha – Rescue & Defense Robot Prototype (*Group Project*)

Built a prototype robotic system for rescue operations during disasters such as fires, earthquakes, and mining accidents. Implemented obstacle detection, temperature monitoring, and wireless control.

**Technologies:** Arduino, Embedded C, Sensors, Wireless Modules, Robotics Framework

### Quick Bill App (Flutter + Firebase)

Created a billing and invoicing mobile app with real-time data sync, product management, customer database, and PDF invoice generation. **Technologies:** Flutter, Dart, Firebase

### Employee Recruitment Website (Firebase)

Developed a recruitment platform enabling job posting, applications, real-time data access, and secure authentication. **Technologies:** HTML, CSS, JavaScript, Firebase, Firestore

### Product Selling App (E-Commerce)

Built an e-commerce mobile application with product listings, authentication, cart management, and order tracking. **Technologies:** Flutter, Dart, Firebase, Firestore, Provider

### Adaptive Wheels – Motion Sensor Based Wheelchair (Arduino UNO)

Developed a motion sensor-based smart wheelchair controlled through finger movements. A motion sensor mounted on the user's finger detects tilt and direction, which is processed by Arduino UNO to control the wheelchair's movement. The system enables hands-free, intuitive navigation and improves mobility for physically challenged users.

**Technologies:** Arduino UNO, Motion Sensor (Accelerometer/Gyro), DC Motors, Motor Driver, Embedded C

### Custom 35V Full-Bridge SMPS Design

Designed and built a custom 35V full-bridge Switch Mode Power Supply (SMPS) using a PWM controller IC and switching MOSFETs. Implemented proper feedback circuitry for voltage regulation and stable output under varying loads. Focused on efficiency, protection, and reliable power conversion.

**Technologies:** PWM Controller IC, MOSFETs, Feedback Control, Power Electronics, SMPS Design

### Web Games (HTML/CSS/JS) - UNO Game, Tic Tac Toe, YGPA & Percentage Calculator

- UNO Game – Interactive browser-based version with turn-based logic
  - Tic Tac Toe – Single-player & multiplayer modes
  - YGPA & Percentage Calculator – GPA calculator with subject-wise inputs
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## ACHIEVEMENTS & CERTIFICATIONS

- Computer Maintenance & Networking Course — *Grade: A+ (WBSCTVESD)*
  - Certified PLC & Industrial Automation Engineer — *MSME*
  - Certified Mobile Repair & Smartphone Technician — *650 hours (WBSCTVESD)*
  - Certified Electric Vehicle Service Technician — 2 Month (Sambhav Foundation Angel One)
  - Certified TV Repair Technician
  - State-Level Electronics Model Presentation Participant
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## ACTIVITIES & EXPERIENCE

- Participated in workshops on Arduino, amplifier design, embedded systems, and circuit simulation
  - Hands-on experience with PC assembly, OS installation, network configuration
  - Regular practice in electronic repair: smartphones, PCs, consumer electronics
  - Active participation in hackathons and coding competitions
  - Prototype development for AI and rescue robots (Kiyo & Asha)
  - Indie game development using Python (Pygame) and JavaScript
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## INTERESTS

- SMPS & Amplifier Design
- Robotics & Automation
- Electronic Device Repair
- PC Building & Optimization
- Game Development (2D/3D)

## LANGUAGES

- Bengali
  - Hindi
  - English
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Signature: \_\_\_\_\_



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