HITESH PANIGRAHI

hitesh.edu9@gmail.com | LinkedIn |Portfolio| (+91)-845-508-7880

EDUCATIONAL QUALIFICATIONS

- Bachelor of Technology in Electronics Engineering – Odisha University of Technology and Research *(2023-27)*
- Diploma in Electronics and Telecommunication Engineering – UCP Engineering School *(2019-22)*

EXPERIENCE

Freelance Electronics Developer - Self-Employed (2016 - present)

Work	• Designed and built **custom electronics projects** for clients, including PCB designs and IoT-based solutions. • Assisted seniors with **final-year projects**, ensuring successful implementation and delivery.
Achievements	• Developed and delivered **15+ custom electronics** projects with 100% client satisfaction rate. • Reduced project development time by 40% through implementation of **AI-assisted** workflows. • Reduced average project costs by 25% through **optimized component selection** and design practices. • Created reusable project templates that **increased development efficiency** by 50%.

Project Contributor - Energy Club, OUTR (2023 - present)

Work	• Assisted with **soldering tasks** to ensure accurate and robust connections for various circuits and PCBs • Collaborated on sensor and module integration, ensuring precise calibration and seamless functionality in projects. • Provided **tips and tricks** to team members to optimize workflows, improve efficiency, and enhance overall project.
Achievements	• Helped successfully complete **3+ major club projects**, including a line-following robot and Robo Race Bots. • Enhanced team collaboration by streamlining project workflows and troubleshooting technical issues effectively.

AI Intern – Digital Bhem (*Remote*) (2024 - 24)

Work	•**Task-1:** Developed an image classification **AI model** using TensorFlow and the CIFAR-10 dataset. • **Task-2:** Designed, developed, and deployed an **AI chatbot** using **HTML, CSS and JavaScript**.
Achievements	•Achieved a significant test accuracy for the image classification model, demonstrating strong model performance. • Delivered a fully functional AI chatbot that enhances user experience with natural conversational capabilities.

Intern – Allision Solar Technologies (*On-Site*) (2022 - 22)

Work	• Gained in-depth knowledge about solar panels and renewable energy technologies. • Learned various techniques related to solar panel operations and maintenance.
Achievements	• Developed a strong foundation in **renewable energy systems** and their practical applications. • Improved technical knowledge and hands-on skills in solar energy solutions.

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, JavaScript
- **Web Development:** HTML, CSS, responsive design
- **Tools:** Visual Studio Code, Git, GitHub
- **PCB Designing:** KiCAD, EagleCAD, Proteus, Altium Designer.
- **Hardware**: Arduino, ESP8266/32, Raspberry Pi, Various Sensors.
- **AI Tools**: ChatGPT, Gemini, Claude, Perplexity, Copilot, etc.
- **IoT Platforms:** Blynk, Firebase.
- **3D Modeling & Printing:** Fusion 360.

PROJECTS

Advanced PID Line Follower Robot (2024 - present)

Task	• Engineered a high-precision line-following robot achieving 95% accuracy in complex paths. • Implemented adaptive PID algorithm with real-time parameter tuning.
Output	• Achieved 30% faster completion time compared to traditional line followers. • Reduced power consumption by 40% through optimized motor control

IoT-Based Sun Tracking & Solar Monitoring System (2024 - present)

Task	• Developed an IoT-based solar panel system integrating **voltage sensors, DHT11**, and **LDRs**. • Implemented features like **sun tracking**, automated cleaning with wipers, and a protective shield. • Created a **Blynk-based monitoring dashboard** for real-time parameter tracking.
Output	• Enhanced reliability by automating cleaning and protection mechanisms. • Simplified monitoring with an intuitive IoT interface.

Custom Bare-Bones Arduino PCB Design (2023 - present)

Task	• Designed a compact and cost-efficient **bare-bones Arduino PCB** using **KiCAD**.. • Integrated only essential components for **optimized functionality.**
Output	• Reduced PCB size by **40%** while maintaining core Arduino functionality. • Minimized cost per unit by **50%**, making it suitable for budget-friendly projects.