Pratyush Kundu

Electrical Engineering Undergraduate
Siliguri, West Bengal, India
+91-7586093596 | pk2728@ee.agemc.ac.in
linkedin.com/in/pratyushkundu | github.com/Pratyushkundu01

Profile

Electrical Engineering undergraduate with interest in **Robotics, Embedded Systems, Power Electronics and Power Systems, Digital and Analog Electronics, and Autonomous UAVs**. Hands-on experience in **embedded hardware integration, real-time control, sensing systems, and MATLAB-based modeling**.

Education

Alipurduar Government Engineering and Management College *2023 – 2027*
Alipurduar, West Bengal, India
B.Tech in **Electrical Engineering** (MAKAUT) | WBJEE 2023 Qualified

Higher Secondary — WBCHSE (English Medium) *2020 – 2022*
Siliguri, West Bengal, India
Siliguri Baradakanta Vidyapith — Science **(82.2%)**

Secondary — WBBSE (English Medium) *2015 – 2020*
Jalpaiguri, West Bengal , India
Pranavananda Centenary Shikshayatan (83.7%)

Technical Skills

Programming: C,C++, Python | **Embedded Systems:** ESP32, Arduino, GPIO, PWM, UART, EEPROM
Core skills: Power Electronics, Motors, Rectifiers
Tools: MATLAB, Simulink, PSpice, Multisim | **Domains:** Robotics, UAVs, IoT, Embedded Systems, Power Electronics

Experience

Summer Intern — Jalpaiguri Government Engineering College *Jun–Jul 2025*

- Control system modeling using **MATLAB/Simulink** and circuit simulation using **PSpice**.
- Practical exposure to transformers, motors, variac operation, and coil winding.
- Industrial observation of electrical systems at Caron Tea Factory.

RKVY Trainee — Indian Railways (Kolkata Metro) *Jul 2024*

- Studied traction motors, substations, battery banks, and metro power distribution.
- Learned about the maintenance of Rolling Stock.

Projects

ASCEND — Autonomous UAV for GPS-Denied Exploration *Ongoing*

- Vision–inertial navigation, energy-aware mission logic, and fail-safe autonomy.

S.A.N.K.A.L.P. — Signal-Activated Robotic Navigation System GitHub

- Team Lead; ESP32–Arduino UART architecture, EEPROM state retention, sinusoidal PWM control.
- Finalist — Control Craft, SRIJAN 2K25, **Jadavpur University.**

IoT-Enabled Robotic Car with Obstacle Detection GitHub

- ESP32-based robotic platform with ultrasonic sensing and autonomous obstacle avoidance.

Technical Interests

Autonomous Systems, UAV Navigation, Embedded Systems, Power Electronics Fundamentals, Sensors & Actuators, Industrial Electrical Systems, Robotics System Integration.

Certifications

IoT — NPTEL (**IIT Kharagpur**) **Elite + Silver**
Joy of Computing using Python — NPTEL (**IIT Ropar**) **(Elite + Silver)**
Problem Solving Through Programming in C — NPTEL (**IIT Kharagpur**)

Achievements and Co-Curricular Activities

Finalist in Robotics Contest at **Jadavpur University** | Event Organizer — **College Quiz** (Quiver) |
Content Moderator — **Siliguri Quiz Club** | Runners-up at **Quiz Premier League Season 10**
Finalist in Creative writing Contest at **Coochbehar Government Engineering College**