

Rajarshi Mondal

✉ rajarshimondal21@gmail.com ☎ 9163362827 📍 Kolkata, india

📅 2001/09/21 🇮🇳 Indian 🔄 <https://github.com/MISTERNEGATIVE21/>

🌐 <https://www.linkedin.com/in/rajarshi-mondal-5b70a9228/>

🔗 <https://rajarshimondal.pages.dev>



PROFILE

A passionate learner with 6 years of experience in Linux and C basics. Hands-on knowledge in IoT and instrumentation.

- 2 years of experience solving tech problems in matters pertaining to Arch-Linux and Docker.
- A contributor to Free Open Software Solutions for all.
- Made professional-grade websites for small firms and NGOs.
- Electronics Tinkerer with knowledge of Process Control.
- Currently building Skills as an SoC Designer

EDUCATION

VLSI DESIGN

Visvesvaraya National Institute of Technology [🔗](#)

2024-08 – 2026-08
Nagpur, India

B.Tech Applied Electronics And Instrumentation

Heritage Institute of Technology [🔗](#)

2020 – present
Kolkata, India

Senior Secondary School

DPS Ruby Park [🔗](#)

2018 – 2020
Kolkata, India

Secondary School

Garden High School [🔗](#)

2016 – 2018
Kolkata, India

SKILLS

Programming

C/C++ , Python

Docker and Linux Administration

AI and ML

Numpy, Scikit-learn, Tensorflow

Robotics and Instrumentation

Arduino , PLC , Assembly , MicroPython , Sensors, Basic Cad Software

DIGITAL ELECTRONICS

Understanding of Logic Gates and their Functionality

PCB Designing

Basic designing using Flux.ai

CADENCE

VIRTUOSO , DC COMPILER , GENUS

Sentaurus TCad WorkBench

SDEVICE , SDE Coding

Vivado Xilinx

Verilog Coding , FPGA

COMSOL Multiphysics

Electromagnetics , Solid Mechanics

Prompt Engineering

Optimizing AI-generated content through advanced prompt architecture

LANGUAGES

English



Bengali



Hindi



PROJECTS

Plymouth Boot Maker

2020 – present

A custom Linux Utility to Generate Boot Screen

I currently maintain the upstream version from the previous python2 to python3.

Python libs is used as Gui and the script used to generate is completely coded in C.

Campus Saathi Seva [↗](#)

2021-08 – 2021-09

E-governing Campus Interface

A completely self-functioning college governing site deployed on IPFS cloud for Better Student Chapter facilities and better infrastructure which shall bypass the need for google Suite which is very costly and increases Dependencies on a private firm.

MATSYA OS [↗](#)

2021 – present

A Custom Linux Distro

A New Operating System with Matsya Gui Interface forked from Cutefish Os . A desktop solution for Atma Nirbhar Bharat.

Advanced Arduino Line follower with Object detection [↗](#)

2022-08 – 2022

IOT_JACKET [↗](#)

2022-01 – 2023-03

The IoT Smart Jacket is a wearable technology project that integrates various sensors and devices to provide real-time environmental and health data

- Neo GPS: Allows for location tracking and movement analysis.
- DHT11: Measures temperature and humidity in the surrounding environment.
- ESP32: Serves as the central processing unit for data collection and communication.
- Pulse Oximeter Sensor: Monitors oxygen saturation levels and pulse rate for health tracking.
- ESP Touch Sensor: Enables easy configuration and connectivity.
- Features
- Real-time Location Tracking: Utilizes the Neo GPS module to provide accurate location information.
- Environmental Monitoring: The DHT11 sensor records temperature and humidity data for the wearer's comfort.
- Health Tracking: The Pulse Oximeter sensor measures SpO2 levels and pulse rate, enabling health monitoring.
- Wireless Connectivity: The ESP32 connects to local Wi-Fi networks or other IoT devices using the ESP Touch sensor.
- Data Storage: Collects and stores data for later analysis or transmission to a central server.
- User-Friendly Interface: Provides an intuitive way for users to interact with the jacket.

Docker IOT STACK [↗](#)

A ready to deployable service on Docker to gather data from sensors and Store in Database

ESP_TV [↗](#)

2023-08 – present

A streaming client to play videos on Embedded Systems

HID Foot Pressure Analysis [↗](#)

2023-07 – 2024-04

Smart_Shoe_Beacon

2024-02 – 2024-02

location tracker bot

Using Indigenous IOT solutions like ConsentiumIot to serve the backend for Gps tracking

RISC V SOC 32bit

2024-09

Designing of a SOC for Game Controller

SOI Characteristics in Sentaurus WorkBench

SOI Device Characteristics in Sentaurus Workbench: Subthreshold Slope & Threshold Voltage Variations Across Nanometer-Scale Channels
Understanding the effect SOI over

Analog Amplifier Design using Cadence

simulating an analog amplifier using Cadence Virtuoso with the TSMC 180nm CMOS technology node.

DFT Verification of ISCAS 12-bit Adder using Tetramax & Assura

(DFT) verification of a 12-bit ISCAS benchmark adder using Synopsys Tetramax and Assura toolsets

Characterization of ULTRARAM

Studying the device physics in Santarus and simulation of ULTRARAM from IEEE journal paper

2025-11 – 2025-02

Zybo Z7 as a Small AI Accelerator: Edge AI on FPGA

To implement a lightweight neural network or AI inference engine on the FPGA fabric, making Zybo Z7 a cost-effective edge AI platform.

2025-06 – Present

COURSES

Python Essentials 2 [↗](#)

CISCO Network Academy

Python Essentials 1 [↗](#)

CISCO Network Academy

Hands-On Machine Learning using Python

ARDENT COMPUTECH PVT LTD

2022-09 – 2022-09

Kolkata, India

Mobile and Web Design & Prototyping [↗](#)

UDEMY

2022 – 2022

Introduction to IOT

CISCO Network Academy

INTERESTS

Tinkering with Electronics | Reverse Engineering | Gaming | Self-hosting | Painting | Photography | Tech Knowledge — Information regarding new trends in Consumer Electronics and Technologies used.

ORGANIZATIONS

TATA COMMUNICATIONS LIMITED

Summer Trainee

Summer Internship , Understanding of MAN Networking . Basics of Fibre Optics and Laying .

2023-06 – 2023-07

Kolkata, India