

# Rudro Dip Sarker

 [github.com/rudrodip](https://github.com/rudrodip)  [rudrodip.tech](https://rudrodip.tech)  [linkedin.com/in/rudrodip](https://linkedin.com/in/rudrodip)  [official.rudrodipsarker@gmail.com](mailto:official.rudrodipsarker@gmail.com)

## EDUCATION

### Rajshahi College

October 2023

*High School Diploma in Science*

*GPA: 5.0/5.0*

*Major Subjects: Information and Communication Technology (ICT), Physics, Mathematics*

## SKILLS

**Languages:** C, Python, Javascript, Typescript, Go, C++, Dart, Solidity, Rust

**Web Technologies:** React, Next.js, HTML, HTMX, CSS, Tailwind CSS, Framer Motion, GSAP

**Backend Frameworks:** Node.js, Bun, Hono, Elysia, Express, Echo, Fiber, FastAPI, Flask

**DevOps:** Docker, AWS EC2, AWS ECS, AWS Lambda, Cloudflare Workers, Cloudflare CDN

**Web3:** Ethereum, Solana, Sei, Polygon

**Mobile App Development:** React native, Expo, Flutter

**Microcontrollers:** Arduino UNO, Arduino Nano, Arduino Mega, ESP8266, ESP32, ESP32-S3 series (C++, C, Rust)

**Tools:** Git, Unix Shell, Vim, Neovim, Nano, Postman, Insomnia

## PROJECTS

**Sonicrypt** | *ESP32, React Native, Next.js, @solana/web3.js, C++, Typescript, Bluetooth low energy* Apr. 2024

- Developed the **world's first** blockchain transaction sonification device for Colosseum Hackathon 2024, with  $\leq 550$ ms latency, running on 160mA without requiring third-party servers, interfacing directly with the Solana blockchain.
- Studied solana rpc documentation in-depth, made an **app** for Solana wallet integration, device configuration, and device emulation, and a **website** just within 2 weeks.

**NexusOS** | *Next.js, Typescript, Redux, Github Octokit, Vercel AI SDK, NextAuth, OpenAI-API, Zenodo-API* Oct. 2023

- Ranked **Top 10%** in NASA Space Apps Challenge 2023 (Global Nominee) with this open science collaboration platform built in 2 days.
- Integrated GitHub, Zenodo, and AI to enable research paper discovery, summarization, and collaborator recommendation
- Implemented GitHub OAuth, used Supabase PostgreSQL, Zenodo API for paper search, and OpenAI for summarization.

**Harmonic Motion Analyzer** | *Python, OpenCV-Python, Scipy, Numpy, PyQt5* Sep. 2022

- Developed a harmonic motion analyzer using computer vision techniques for Creative Coding Competition, securing the **highest score** of **46/50**.
- Predicted pendulum length with **99.89%** accuracy using OpenCV for object tracking, SciPy for curve fitting to a damped harmonic motion function, and PyQt5 for GUI rendering.

## EXPERIENCE

**Sonicrypt** | *Founder* Apr. 2024 – Present

Currently building Sonicrypt Plus and Sonicrypt Pro in my basement

Built the **world's first** sonification device for blockchain transaction on Solana chain

Developed sonicrypt app for configuring sonicrypt and for emulation

**LunCo** | *Open source contributor* 2023 Oct - 2024 Feb

Developed the official website as open source contributor

**Rajshahi College Science Club** | *Secretary of IT* 2022 – 2023

Developed the official website of the club

Supervised competitive programming competition under Rajshahi College National Science Fest 2023