Rudro Dip Sarker

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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 ≤550ms 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

Leapflow | *Founding Engineer*   May. 2024 – Present
Currently building MVP for Leapflow
Developed leapflow landing page

LunCo | *Open source contributor*   2023 Oct - 2024 Feb
Developed the offcial **website** as open source contributor

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

EDUCATION

Rajshahi College   October 2023
High School Diploma in Science   *GPA: 5.0/5.0*
Major Subjects: Information and Communication Technology (ICT), Physics, Mathematics