

Brahmajit Das

✉ brahmajit.xyz@gmail.com — 📁 listout — 🔄 listout — 📱 brahmajit

Work Experience

• Lifespark Tech, IIT Bombay

Firmware Developer

Mumbai, Maharashtra

September 2021 — Present

- Porting firmware for other MCU models
- Implementation of communication protocol (ESP8266, Wi-Fi, MQTT, BLE)
- Implementing cloud technologies using AWS and GCP's SDK
- Research and Development

• Sironaaz Lab

Embedded Systems Engineer, Intern

Calcutta, West Bengal

August — September, 2021

- Ported existing system to different processor architecture.
- Refactor existing code and implement better communication protocol (SPI and I2C).
- Integrate UI with hardware.

Education

• Gurudas College

B.Sc. with Honors – Computer Science; CGPA: 7.493

Kolkata, India

2018 – 2021

Courses: Operating Systems, Data Structures, Algorithms Design and Analysis, Databases, Networking, Machine Learning

Core Technical Skills

- **Programming Languages:** C, C++, Java, LaTeX, Python, shell scripting, SQL
- **Tools:** Git, Docker, ssh, PlatformIO, FreeRTOS, ESP-IDF
- **Platforms:** Linux, BSDs, Windows, RaspberryPi
- **μ-Processors:** ARM STM32, Atmega328p, ESP32

Personal Projects

- **Interfacing with sonar module using Atmega328p:** Using AVR C and **Atmega328p** to interface with **HC-SR04** (sonar module). UART was used as the communication protocol. [Link to project.](#)
- **FreeRTOS on ARM STM32F103:** Ported the FreeRTOS to ARM STM32F103C8T6 (Cortex M3), known as **Bluepill**. Then used to generate a PWM with Timer 2 as test case. [Link to project](#)
- **My Compiler Writing Journey:** Writing a C compiler from scratch, using the **acwj** as the base starting point. [Link to project.](#)

Open Source Contributions

- **Gitlab Shell** Changed the default logging format to **JSON** from plain text, was part of the **14.1 release**. GitLab Shell handles git **SSH sessions for GitLab** and modifies the list of authorized keys. [Merge Request 467.](#)
- **DevOps Guide** Contributed to **several chapters** of this popular DevOps guide (**3.8k stars**), including chapters for Virtual Machines, Linux commands and tools for DevOps and Firewall. [Link to all my contributions.](#)

Achievements

- **HacktoberFest 2020:** Among 70,000 participants, awarded goodies and cash prize.
- **College Seminar:** First position in college seminar. Using Arduino and HC SR04 module, created a sonar with GUI feedback.