

# Arnab Sen

 Durgapur, India  arnabsen1729@gmail.com  arnabsen.dev  arnabsen1729  arnabsen1729

## EDUCATION

**B.Tech**, Indian Institute of Engineering Science and Technology   
Stream: Computer Science and Technology (CGPA 9.62)

2019 – 2023 | Shibpur, India

## EXPERIENCE

**AR/VR Intern**, GMetri 

Apr 2023 – Jul 2023

- Worked on the toolkit to generate dynamic metaverse based on user input utilizing OpenAI's GPT model.
- Designed and implemented a user-friendly UI for creating AI Brains and uploading information to populate and personalize their metaverse.
- Executed API integration to ensure the full functionality of the product, enabling smooth communication between different components.
- Tech Stack: *React.js, Typescript, Storybook, Node.js, Docker*

**SDE Intern**, Cypherock 

Oct 2022 – Mar 2023

- Successfully integrated new protocol and server APIs to facilitate cryptocurrency exchange for users.
- Developed and integrated swap functionality for multiple cryptocurrencies including Bitcoin, Ethereum, Polygon, Solana, & ERC20 tokens in device firmware.
- Designed and implemented user-friendly swap functionality screens in the desktop application.

*Tech Stack: C++, STM32 microcontrollers, Typescript, React.js, Electron.js, Redis, MongoDB.*

**SWE Intern**, Google 

May 2022 – Aug 2022 | Bangalore, India

- Implemented an email-based notification system for an Ads Resource Engineering Team.
  - Explored the various notification platforms available at Google to select the best fit for our use case.
  - Prepared a detailed design doc for the implementation with the component overview, workflow diagrams, etc.
  - Integrated the notification system with a feature to demonstrate its working.
- Implemented features, fixed bugs, & performed unit testing in an internal Ads Planning Tool.
- Worked with *Java* in the backend and *Angular JS & Javascript* in the front end.

**Student Intern**, Summer of Bitcoin 

Jul 2021 – Sep 2021

- Improved support for User Statically Defined Tracing (USDT) in Bitcoin core by adding new tracepoints and scripts, leveraging eBPF (extended Berkeley Packet Filter) technology.
- Learned Bitcoin Protocol Development.
- Conducted a session on "Bitcoin Script" with an audience of **150**.
- Worked mainly with *C++, gdb, Python*, and *Makefile*. (PRs: *PR-1* , *PR-2*  )

**Full-Stack Web Developer**, Coronasafe 

Feb 2021 – Jun 2021

- Added new features to a healthcare project based in Kerala called **Arike** (*Link to Commits*  ).
  - Built on *Rails* and *Rescript React* and used by **2000+** hospital staff and nurses.
- Fixed bugs and designed the front end for the project **Life** (*Link to Commits*  ).
  - Built on *NextJS*, provided COVID support, and was used by **40K+** people.

## SKILLS

**Languages** (C/C++, Python3, Javascript, Golang, Java, Typescript)

**Frameworks** (React JS, Vue3, Bootstrap, Tailwind, Flask, Ruby on Rails, Express Js)

**Others** (Firebase, MongoDB, Postgresql, Linux, Docker, Git)

## PROJECTS

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### Markdown to PDF, Converts a Markdown file to PDF with the formatting. [Github](#)

- Implemented a markdown parser from scratch.
- Format markdown elements like Heading, Paragraphs, Bold, Italic etc. and even Images.
- Built using **Golang** & integrated automatic **Linting & Testing** on PRs with **GitHub Actions**.

### Kronos Tracker, Todo management tool that groups tasks on the basis of priority levels. [Github](#)

- Client App built with **ReactJs** and **Tailwind CSS**.
- Added visualizations to display the past performance using **Chart.js**.
- Uses **Firebase Data storage** to store the todos data and **Firebase Auth** for authentication.

### HackersNLadders, Traditional Snakes and Ladders game with an Arduino controller. [Github](#)

- An arduino-based module as the game controller, interfaced with the computer through a Serial port.
- Built with **Pygame** for the game interface and the input from **Arduino** handled by **Pyserial Library**.

## AWARDS

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### Cyber-Security Hackathon by, RISE

Sep 2022

**2nd position** among **22k participants** in the Cybersecurity Hackathon.

### Codevita 2022, TCS

Apr 2022

Ranked **98 globally** among **136,054** students (from **34** countries) in Round 2.

### Hashcode 2022, Google

Feb 2022

All India Rank of **25** and a global rank of **311** with a score of 3001126 pts.

### ICPC Asia Kanpur-Mathura Regionalist 2020, ACM-ICPC

Aug 2021

Ranked **72** among **200+** teams.

### Summer of Bitcoin

Jun 2021

Among the **50** students that were selected out of **5000+** applicants.

### Best Hardware Hack, Major League Hacking

Jan 2021

Won the 48 Hour hackathon in the Hardware Category.

### CoronaSafe Engineering Fellowship Program, AICTE

Jan 2021

Secured a rank in the top **24** out of **50,452** applicants.

### XROS Fellowship, Reskill, FICCI, Digital India, Meta

Apr 2023

Among the top **100** candidates selected out of **10,000** applications & 2,500 project proposals.

## CODING PROFILES

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- **Leetcode** rating **2006**, top 2.31%. [arnabsen1729](#)
- **Codeforces** rating **1644** tagged Expert. [arnab1729](#)
- **CodeChef** rating **1841**, 4-stars. [arnab1729](#)
- **CTF Time** all India ranking **76** and **1116** globally. [0xw3bs3c](#)

## ORGANIZATIONS

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### DSC-IIEST, Co-Lead

- Facilitated 30 Days of Google Cloud event and received a participation of 161.
- Gained over 820 members in less than a year.
- Hosted AMAs with guest speakers, moderated sessions and conducted 40+ events.