Soham Sen

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Academic Qualifications

Year	Degree/Certificate	Institute	CGPA
2020 - 2024	Bachelors of Technology in Instrumentation Engineering (Department of Electrical Engineering) Minor in Computer Science	Indian Institute of Technology, Kharagpur	8.63/10
2020	Grade XII (All India Senior School Certificate Examination)	Birla High School, Kolkata	94.0%
2018	Grade X (All India Secondary School Examination)	Birla High School, Kolkata	94.0%

Work Experiences

LimeChat.ai — Backend Intern   *May 2023 - Present*

- **Architected** and **developed** a scalable **microservice**, improving message delivery rates by a quantifiable 40%, designed to facilitate message dispatch through multiple providers.
- Implemented a novel system for **receiving webhooks** from diverse providers, seamlessly normalizing them into a unified format, streamlining processing for downstream applications.
- Leveraged **MongoDB** to create a **real-time NoSQL database**, ensuring efficient storage and retrieval of sent and received messages alongside their respective statuses.
- Employed **TypeScript**, **NodeJS**, and **Python** to optimize the existing codebase and to introduce innovative features, enhancing overall software functionality.

FounderBlocks — Software Development Engineer   *March 2022 - Present*

- Developed and deployed applications and websites for 8+ clients across various industries, utilizing multiple technologies such as **Django**, **React**, **NextJS**, **NestJS** and **Flutter**.
- Implemented **CI/CD pipelines**, and managed servers and databases running on Linux. Utilized cloud technologies such as **Amazon AWS**, **Google Cloud**, **Scaleway**, and **Netlify** to implement auto-scalability.
- Improved application performance by 70% through code optimization and restructured the codebase to improve readability.
- Worked with **Agile** and **Scrum** development methodologies, including daily stand-ups, sprint planning and retrospectives.

Summer of Nix 2022 — Participant   *June 2022 - September 2022*

- Participated in the 8-week long workshop, funded by the European Commission and contributed to the **NixOS** project.
- Utilized **Nix** to package multiple software and successfully published 8+ packages to the Nix Packages software repository.

Aftershoot Inc. — Fullstack Intern   *June 2021 - July 2022*

- Successfully **re-architected** a **NodeJS** application into **Rust** which led to a **100% improvement** in speed and heavily reduced memory usage, which lead to an increase in customer satisfaction, along with a **25% reduction** in production bugs.
- Implemented **Serverless functions**, **CI/CD** and **Data Pipelines** in **AWS** and **Google Cloud** which holds all the server-side functionality of the application, and makes it **auto-scale** with the number of users.
- Re-wrote the account website in **React** which led to a **40% speed improvement** and quick first-time load of the site.

Awards

InterIIT Tech Meet 11.0 — Contingent Gold   *December 2022 - February 2023*

- Secured overall **first position** consecutively in the **InterIIT Tech Meet 11.0** as a team held by the **Indian Institute of Technology, Kanpur**.
- Participated in **4+ events** as a **developer in the contingent team**, working on **frontend**, **backend** and **cloud systems architecture**.

- Developed a **web application** for a **domain-specific chatbot**, created **Python scripts** for **data analysis** of research papers, created exploits for **CVEs**, and developed new novel applications utilizing **MetaMask Snaps** to improve the user experience for web3 users.

ETHIndia '22 — Hacker   *December 2022*

- Awarded for **best use case** for **Polygon ID**, and won **pool prizes** from **StackOS**, **Ethereum Naming System** and **Push Protocol**.
- Developed a **web3-based community management platform** that can obtain **social media reputation scores** for users without tying their social profiles to their wallet addresses, thereby preserving **privacy** and increasing **security**.
- Utilized **Solidity** to develop **smart contracts** and deployed them onto the Ethereum and Polygon blockchains.

InterIIT Tech Meet 10.0 — Contingent Gold   *March 2022 - May 2022*

- Secured **first place** in the Silicon Labs Entrepreneurship Challenge at Inter-IIT Tech Meet, a competition among India's top engineering colleges.
- Developed a **prototype and theoretical model** for an Internet of Things (IoT) related project, utilizing the **C programming language**.
- Implemented **cloud integration** for the IoT project and managed device-to-internet communication.

Google Code-In 2016 — Grand Prize Winner   *Novemeber 2016 - January 2017*

- Winner of **Google Code-in**, a global coding contest organized by Google to promote open-source software.
- Received an all-expenses-paid trip to **Google headquarters** in Mountain View, California as a prize.
- Developed 2 **Android applications** and a **Django-based web application**, contributing to bug fixing, feature implementation, and documentation tasks for a total of **100+ hours**.

Projects

- **YABin**: Created a simple but feature-rich pastebin using **SvelteKit**, having features such as client-side encryption with **AES-256-GCM and SHA-512-PBKDF2 encryption**, syntax highlighting, simple **REST API**, expireable pastes and more. Containerized using **Docker** and deployed using **Kubernetes**.
- **YTSwag**: Developed YTSwag, a feature-rich modification of YouTube Music, incorporating lyrics integration, customizable design templates, and additional functionality, resulting in a **100% increase in user satisfaction**.
- **Pinocchio Discord Bot**: Designed and implemented a high-performance Discord bot utilizing **Python**, featuring interactive games and utilities. Bot reached over **5,800 groups** and boasted an estimated **600,000+ active users**. Utilized **asynchronous logic** for optimal scalability and deployed using **Docker** for **horizontal scaling capabilities**.
- **GradeChecker**: Developed a **web-based solution** to facilitate the collection and verification of student data through a **crowd-sourced approach**, resulting in the creation of comprehensive rank lists and **statistical analysis** for subjects and departments. Accommodated over 12,500+ records with **100% data authenticity** validated through **API integrations** with the official institution website.

Positions of Responsibility

Executive — Kharagpur Blockchain Society   *February 2023 - Present*

- Delivered a series of three instructive talks and workshops focusing on **web3 fundamentals**, introduction to **Solidity**, and the **mechanics of Bitcoin**, stimulating the curiosity of 1,500+ students in blockchain technologies.
- Contributed to four different **web3-focused hackathons**, demonstrating the practical applicability and potential of blockchain in solving complex issues.
- Led a campaign promoting the adoption and understanding of **web3 and blockchain technology** within the university and beyond, aiming to cultivate a community well-versed in cutting-edge digital technologies.

Advisor — Kharagpur Open Source Society   *June 2021 - Present*

- Facilitated training workshops on various technologies including **Python**, **Git**, **Linux**, and **Docker** for over 2,000+ students.
- Helped organize **Kharagpur Winter of Code**, inspired by Google Summer of Code, which had over 50 projects and 1000 students.
- Developed various applications to assist students in their learning journey.
- Promoted and advocated for the use of **open-source software** amongst the student body.

Skills

- **Languages**: Python, Go, TypeScript/JavaScript, Solidity, Rust, C/C++, Java, PHP, Verilog, Bash, MATLAB
- **Frameworks and Tools**: Django, React, Svelte, Vue, Laravel, Symfony, Gin, Qt, Unity, Git
- **Miscellaneous**: MySQL, PostgreSQL, Amazon Web Services, Google Cloud Platform, Linux, LaTeX