

# DEEPAK SANGLE

Software Engineer | IIT Kanpur CSE

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## WORK EXPERIENCE

### Software Engineer

#### Fiber AI (YC S23)

05/2024 - Present | Remote

- Elastic Search:**
  - Implemented highly scalable and performant search engine to query over **850M+** docs using **Elastic Search** involving complicated join and nested queries. Improved computation time from average of **60-120 seconds to mere 3-5 seconds**
  - Implemented appropriate storage optimisation and data sharding techniques to reduce **annual AWS bill** from **100K USD to only 15K USD** a year for elastic clusters
- LinkedIn Web Scraping:**
  - Created highly resilient **LinkedIn job-posts scraper**, which can scrap all **13M+** jobs in **2 weeks** while overcoming LinkedIn's highly difficult **anti-scraping policies**
- Geo-Coding:**
  - Created solutions to geocode **30M+** different locations to extract latitude and longitude information. Implemented **rate limiters** and **concurrency** and **retry mechanism** to make the cron job highly stable
- Cron jobs:**
  - Used Javascript's **Streams** and **advanced Data Structures and Algorithms** to improve performance of CPU intensive computations. Reduced completion time of these cron jobs from **3 weeks to 1 week**

## INTERNSHIPS

### Software Developer Intern

#### EmployWise

01/2024 - 05/2024 | Remote

- Applied in-depth knowledge of **Graph-based algorithms** to provide hierarchical customisability to the users using **neo4j** and **DynamoDB** databases in **Spring**
- Implemented an automated system that converts human-readable compensation breakdowns into structured CTC calculations using **GPT-driven models, custom parsers**, and a **Java**-based class to provide accurate, dynamic compensation insights

### Backend Developer Intern

#### Zaapi

08/2023 - 11/2023 | Singapore

- Learnt and developed various back-end API endpoints and **web-hooks**, involving integration with external APIs of **Facebook, Line, Shopee and Lazada**

### Software Developer Intern

#### Visa Inc.

05/2023 - 07/2023 | Bangalore, India

- Engineered highly adaptable and robust microservices to query data across 5+ relational databases and 15+ tables. Leveraged parallel threading and **reactive programming** techniques in **Vert.x** to achieve **10-fold** reduction in response time

### Frontend Developer Intern

#### Florox

05/2022 - 07/2022 | Remote

- Collaborated closely with the backend and UX/UI teams to develop **40+ UI Screens** in **React Native** along with **Redux** toolkit for **IOS** and **Android**

## OTHER WORKS

### PowerToys

#### Microsoft

07/2023 - 08/2023

Applied in-depth knowledge of **C#**, Windows Presentation Foundation (**WPF**) and the **.NET** framework to enhance functionalities of **Microsoft PowerToys** suite by resolving critical issues in it's **Open Source** Github Repository  
[Closed Github Issues Link](#)

### Freelancer

#### Fiverr

01/2024 - 05/2024

Worked as **freelancer** developing custom compilers and interpreters for various programming languages. Understood different clients requirements and maintained a **5 star rating** after delivering **20+ projects** on time

### Async Generator Parallel

#### NPM Package

11/2024 - 11/2024

Architected a **npm package** that lets you start multiple **async iterables** at same time with optional **concurrency** parameter and yields results in the order of completion.  
[Package Link](#)

## EDUCATION

### Bachelors of Technology, Computer Science and Engineering

#### Indian Institute of Technology, Kanpur

11/2020 - 05/2024 | Kanpur, India

CPI  
**8.0** / 10.0

### Higher Secondary School

#### Sarosh Junior College, Aurangabad

03/2018 - 05/2020

Maharashtra, India

%  
**91.4** / 100

## KEY ACHIEVEMENTS

### Academic Achievements

Achieved **All India Rank 985** in JEE Advanced 2020 and **All India Rank 1672** in JEE Mains 2020.

## TECHNICAL SKILLS

### Languages

C, C++, Java, Javascript, Typescript, Haskell, Python

### Web Development

HTML, CSS, Node.js, Express.js, React.js, React Native, Spring (Boot, Web), MongoDB, PostgreSQL, Nest.js, Elastic Search, AWS, Playwright, Prisma, Git

## PROJECTS

### Compiler Design

01/2023 - 05/2023

- <https://github.com/Deepak-Sangle/CS335A-Compilers>
  - Created basic **Java compiler** in **C++**, to translate Java source code to **x86\_64-Assembly language**
  - Performed lexical, syntactic and semantic analysis using **Flex and bison libraries**, created Abstract Syntax Tree (AST) of source code, handled storage allocation on **Control Stack** and created highly portable assembly language code

### mIIT-Kute

01/2022 - 04/2022

- <https://github.com/Deepak-Sangle/mIIT-Kute>
  - Designed, Tested, and Deployed a **Social Networking Web-app** which helps IITK students to communicate
  - Implemented back-end server using **Node** and **Express**, setup database in **MongoDB** using **Mongoose** library, and used **Nodemailer.js** library for email verification

### Computer Graphics

08/2023 - 12/2023

- <https://github.com/Deepak-Sangle/Computer-Graphics>
  - Implemented **3D Modelling**, Phong and Gouraud **Shading techniques**, Texture Mapping, Environment reflection and planar reflection in **webgl2**
  - Implemented various advanced techniques like **Ray Tracing**, Post-processing of textures, multi-pass rendering and shadow mapping

### Dear Diary

05/2023 - 07/2023

- <https://github.com/Deepak-Sangle/Dear-Diary>
  - Implemented **JWT**-based **authentication** and authorization along with **SHA** Algorithm based Password Hashing and **RSA cryptography** algorithm to implement end-to-end encryption