# Vansh Jangir

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#### EDUCATION

IIIT Naya Raipur

Raipur, Chhattisgarh

B. Tech. in Data Science and Artificial Intelligence, CGPA: 8.5

2022 - 2026

**Dundlod VidyaPeeth** 

Jhunjhunu, Rajasthan

CBSE 12th - 95.00%

2015 - 2022

# EXPERIENCE

## ContractKen - Backend Intern | Python, Flask, Redis

August 2024 - Present

- Implemeted changes in OpenAI function calls to make LLM output in JSON more reliable.
- Integrated the use of pdf in ContractKen's MS Word Addin by converting pdf to word file.

## Rizin - Open Source | C/C++, Deassembler, Decompiler | github

- Refactored code for a better management of header files Pull Request.
- Fixed a bug in quitting the rizin CLI in debugger mode Pull Request.

#### Projects

# Hardcode: An online platform to solve coding problems | website github

- Developed an online platform to practice algorithmic problems, submit solutions and get results and statistics about the problem.
- Used **ReactJs** to make responsive frontend, **NodeJS** as backend with **Express** framework, **MongoDB** as a database and **Docker** to ease the deployment of the application. The submitted code runs inside another docker container to prevent any malicious code from damaging the entire system.
- Integrated Rabbitmq as messaging queue to scale the submission process independent from the rest of the system.

## XDB: An ACID compliant database | github

- Created an **ACID** compliant database and storage engine from scratch purely in **Go**, which can be used to insert, update, delete and retreive data.
- Implemented Disk-based **B+tree** data structure to organize data, **Copy-on-Write** append only mechanism for atomic writes and updates, Freelist to reuse disk pages for efficient storage.
- Supports create, read, update and delete operations and point query can be made in  $O(\log n)$  time and range queries can be made in  $O(k+\log n)$

# Load Balancer | github

- Designed a load balancer from scratch in C++ using tcp socket programming, which can be deployed with any kind of http server and also monitor server health and give real time statistics.
- Leveraged thread library for multi-threading and epoll to integrated event driven architecture into the system.
- Multi-threading integration reduced the whole latency by 4x (no of cores) and by integrating epoll, the cpu usage is reduced by 50%.

# Automated Resume Screening | github

- Developed an online platform for recruiters to test and sort resumes according to job profile and create a test for the applicant to test their skills.
- Used Word2Vec and Cosine similarity to predict the resume scores and used gemini api to generate test based on the profile, ReactJS for frontend, NodeJS with Express framework for backend, MongoDB for database.
- Using Word2Vec increased the resume score accuracy to 90%.

# ACHIEVEMENTS

Hackathons: Hack-O-Harbour - AIML track winner

## TECHNICAL SKILLS

Languages: C, C++, JavaScript, Python, Go, C#, SQL.

Tools: GNU/Linux, Git, Docker, MongoDB, Make, CMake, Vim/Neovim, POSIX threads, socket programming, HTML, CSS, ReactJS, NodeJS, NextJS, ExpressJS, Flask.