RAJAT AGRAWAL

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EXPERIENCE

Software Engineer | TCG Digital
Sep 2024 – Present

- Developed an interface for a fine-tuned **LLM** model using the EzeXtend tool, which leverages **React** and Mantine
- Built scalable APIs using NestJS and FastAPI, leveraging PDF parsing and AI technologies to extract and normalize data.
- Co-engineered an end-to-end pipeline that ingests live football match streams, generates real-time multilingual subtitles and audio, and delivers the processed stream to the client via a scalable streaming infrastructure

Software Engineer Intern | TCG Digital
May 2023 – Jul 2023

- Created **Flask** APIs using Python from the ground up, utilizing **Pandas** for Excel file reading, processing, and validation
- Leveraged **Elasticsearch** to efficiently index >100k processed data, significantly improving search and retrieval times
- Handled multi-level error checks, added parallel processing, and deployed it through the **Docker** container

Frontend Developer Intern | IC2C
Aug 2021 – Sep 2021

- Designed and deployed a responsive **React.js** website using Tailwind CSS for a socio-professional platform
- Hosted the website on **Supabase**, utilizing its inbuilt database and Authentication to support various login methods

Associate Manager | Entrepreneurship Cell, IIT Kharagpur
Apr 2020 – Apr 2021

- Directed a 15-member team for Empressario and GES 2021, hosting 20+ VCs, 200+ startups, and 5,000+ participants
- Collaborated with peers to oversee 20+ workshops and competitions, with a total prize pool exceeding 30 lakhs

EDUCATION

IIT Kharagpur — Biotechnology and Entrepreneurship Engineering	2019 – 2024	8.73 CGPA
Lord Buddha School, Kota — CBSE(XII)	2017 – 2019	87%

PROJECTS

Pose Correction App | MTP
Jul 2023 – Sep 2023

- Leveraged **OpenCV** for live feed and **Mediapipe** pose library for accurate detection of landmarks on the human body
- Utilized 32 landmark coordinates to compute angles, which were used to validate accurate posture during exercise
- Used Streamlit to deploy the model as a user-friendly web application (https://workoutapp.streamlit.app/)

AudioSonic(Speech to Image Converter)
Oct 2023 – Dec 2023

- Developed a **NextJS**-based app integrating **Deepgram API** for audio transcription and OpenAI for prompt generation
- Enabled dynamic image creation using state-of-the-art models like Stability AI and OpenAI's image-generation tools

SKILLS

- Framework & Languages: C++, Python, JavaScript, Postgres, React.js, Next.js, Flask, FastAPI, Node.js
- Tools: Postman, Supabase, TensorFlow, ElasticSearch, MongoDB, Git, Figma, Docker, Adobe Suite, Redis, Kafka

COMPETITIONS/AWARDS

- National Finalist in Smart India Hackathon (Top 0.1%) among 8,000+ institutes, built a platform for NDRF teams to aid NDRF teams with auto analysis of social media for improved emergency response
- Secured **'Expert'** rank on Codeforces with a peak rating of 1671, demonstrating strong problem-solving skills
- Secured Gold among 23 IITs by creating a platform for users to access research materials, among other functionalities