

Hasnain Ali

Full-Stack Software Engineer

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Profile

A highly skilled Full-Stack Engineer with over two years of experience in developing AI-driven and scalable web applications using Python (Django), JavaScript (React, Node.js), and Machine Learning technologies. Proficient in designing and optimizing backend architectures, improving database performance, and integrating AI solutions into applications. Experienced in **Natural Language Processing (NLP)**, particularly in **healthcare**, and model training, with a strong ability to develop and deploy AI-powered systems. Currently working on developing intelligent **chatbots for healthcare applications** using NLP to enhance patient interaction and data management. Skilled in cloud deployments on AWS, GCP, Railway, and Vercel, as well as implementing CI/CD pipelines for seamless development workflows. Passionate about leveraging AI to build intelligent applications and drive innovation in software development.

Skills & Technologies

Client Side:

- JavaScript (ES6+), React
- React Query, Tailwind CSS, Bootstrap
- HTML5, CSS3, jQuery, Vite

Machine Learning & AI:

- Natural Language Processing (NLP), Model Training, OpenAI API, Data Science, Scikit-learn, NLP in Health Care, TensorFlow, PyTorch, LLMs, Transformers

Server Side:

- Node.js, Express.js, RESTful APIs, Django
- Database Management: PostgreSQL, MySQL, MongoDB

Cloud & DevOps:

- AWS (EC2, S3), GCP, Heroku

Version Control and Project Management Tools:

- Git, GitHub
- Trello, YouTrack, Slack, Notion

Experience

FULL-STACK ENGINEER | DEVSINC | OCT 2024 – PRESENT

- Currently working on **Turing Apple Project**, leveraging **Large Language Models (LLMs)** to generate responses and analyze model performance.
- Conducting performance evaluations of **generative models**, identifying weaknesses, and enhancing response accuracy.
- Working on **Natural Language Processing (NLP)** solutions, particularly focused on developing **healthcare chatbots** to improve patient engagement and support.
- Developing and implementing **data science solutions** to optimize data pipelines and support AI-driven initiatives.
- Skilled in **Machine Learning, NLP, and Data Science**, with a strong ability to solve complex ML

problems and create efficient, scalable systems.

- Completed the **Tripletan Data Science course** with a 95% score, further sharpening my expertise in the field.

Associate Software Engineer | AMROOD LABS | MAR 2024 – OCT 2024

- Developed and optimized a **Django-based backend** for a mobile application, integrating **PostgreSQL and AWS S3** for efficient data storage and retrieval.
- Developed automated workflows for attendance tracking and request handling, reducing manual effort by **60%** and improving process efficiency.
- Integrated **OpenAI-powered automation**, enabling **intelligent response generation** and contract management.
- Worked as a Ruby on Rails (RoR) developer, implementing AI-driven messaging and contract storage.

FULL-STACK ENGINEER (INTERNSHIP) | ARBISOFT | JUN 2024 – AUG 2024

- Developed a **Django-React** web application with **PostgreSQL**, focusing on full-stack development best practices.
- Optimized **database operations** for faster queries and implemented **bulk data insertion** via load data operation.
- Gained hands-on experience in **frontend development (using React)**, **backend API design**, and **database optimization**.

COMPUTER VISION ENGINEER | FREELANCE | MAR 2023 – JAN 2024

- Worked on a UK-based project aimed at extracting data from patient-submitted PDF forms using advanced computer vision techniques.
- Utilized **OCR, PyScat**, and **Google Vision API** to extract text data from scanned forms.
- Implemented **AWS Rekognition** for enhanced text extraction and image analysis.
- Processed the extracted data and populated it into structured **Excel sheets**, preparing it for machine learning model training.
- Focused on automating the end-to-end process, ensuring scalability and accuracy of data extraction.
- Developed solutions to handle large volumes of form submissions and data, ensuring robust and efficient performance.

Projects

VaultonIQ

<https://app.vaultonIQ.com/>

Tech Stack: Python (Django), PostgreSQL, AWS S3, React Native, OpenAI API, Ruby on Rails, Docker

- **VaultonIQ** is an online platform for tracking the vehicles maintenance information with records of the employees (attendance, overtime) and much more.
- Built and optimized a **scalable Django backend** for a mobile application, improving database efficiency.
- Integrated **AI-powered automation** for intelligent responses and contract management.
- Implemented automated workflows, including **attendance tracking and request handling**, to enhance operational processes.

2ndPlace – Hostel Finder *(Solo Initiative)*

<https://2ndplace-stagging.vercel.app/>

Tech Stack: React, Django, PostgreSQL, MongoDB, Google Maps API, Stripe

- Developed a **hostel discovery platform** that helps users find nearby hostels efficiently.
- Integrated **Google Maps API** for precise location-based searches and **Stripe payments** for seamless transactions.
- Implemented **optimized database solutions** using **PostgreSQL and MongoDB** for scalable data storage.
- Focused on **modern UI/UX design** with best development practices for an intuitive user experience.
- Optimized search functionality, reducing search time by **80%**, enabling users to find hostels 5x faster.

SatCorn – ML-Powered Crop Irrigation System *(Final Year Project)*

https://github.com/HasnainAli47/SatCorn_FYP/tree/master

Tech Stack: Python (Django), React, MongoDB, Machine Learning (Computer Vision), Google Maps API

- Developed an **AI-driven application** using **satellite imagery** to detect corn crop irrigation needs and alert farmers.
- Trained an ML model on satellite imagery, achieving **87% accuracy**, reducing manual irrigation monitoring by **40%**, and improving crop efficiency.
- Implemented **job scheduling features**, allowing users to set tasks (watering, pesticide application) with automated alerts.
- Integrated **Google Maps API** for precise field mapping, supporting **multiple farms and fields** across different locations.
- Designed a **Django-based backend** with a **React frontend**, ensuring scalability and real-time notifications.

Resume Parser - Parsing Data using LLMs [\(LINK\)](#)

Tech Stack: Python (Django), React, SQL, Computer Vision (OCR), Llama-3-70B

- Developed an **AI-driven application** to parse the resume using OCR.
- Using parser and Llama 3 to get and store the data of candidates in the database in a structured way.
- User can upload the CV with proper message handling and then can get the matching candidates using filters like (name, experience, tech stacks and more)
- There is an AI chat-bot implemented from which a non tech HR can also ask the questions to get more insights about the candidate.
- Query optimization and history maintenance has been implemented in the application.

EDUCATION

Bachelors in Computer Science

Comsats University Islamabad (CUI) | CGPA — 3.33

FSc in Engineering

Edwardes College Peshawar | Percentage – 78%