

# Fahad Hussain

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## SUMMARY

Visionary Full Stack **AI/ML Engineer** committed to creating innovative solutions that solve complex global challenges using **Machine Learning** and **Deep Learning** and **Computer Vision**. A proactive problem-solver, focused on **efficiency, optimization**, and continuous learning, delivering impactful results in dynamic environments.

## TECHNICAL SKILLS

- **Programming Languages:** Python, JavaScript
- **Databases:** MySQL, PostgreSQL, MongoDB, DynamoDB, AWS S3
- **Cloud & Infrastructure:** AWS, EC2, Azure, GCP, PythonAnywhere, Docker
- **Libraries & Frameworks:** Selenium, BeautifulSoup, Flask, Django, React, Next.js, PyTorch, TensorFlow, Scikit-learn, scipy, OpenCV, LangChain
- **Other Tools:** Power BI, Google Colab, Hugging Face, Vercel, Nginx, LocalStack, Git, GitHub Actions, **Miflow** Trello, Pyspark, **Prompt Engineering**, Supabase

## EDUCATION

- **University of the Punjab, PUCIT/FCIT** Dec 2021 – June 2025  
*Bachelor's in Data Science CGPA : 3.05/4* Lahore, Pakistan

## EXPERIENCE

- **Freelance**
  - **Web Development (June 2023 – Aug 2023):** Developed a **Django web app** to manage data for 800,000 houses, leveraging open-source geolocation APIs to significantly reduce costs. The application enabled efficient data retrieval and management for clients in the real estate sector. **Enhanced** application performance by **30%** by optimizing database queries, improving the overall user experience and operational efficiency. Custom features were added based on client needs, streamlining data visualization and reporting processes.
  - **Advanced Web Scraping (July 2023 – Sep 2024):** Focused on **Data Mining and Web Automation** by pulling data from diverse industries such as **e-commerce, cryptocurrencies, finance, and medical**. The data retrieved was preprocessed to build predictive models and support lead generation systems. I built and maintained over **70+** web scrapers with proxy extensions to bypass restrictions on major platforms like **Amazon, Google**, and various real estate tech sites. Additionally, I automated the data scraping process using **cron jobs**, which **reduced data retrieval time by 40%** by using threading and parallel computing and **improved operational efficiency** across the board.
  - **Generative AI (Sep 2024 – Dec 2024):** Created an **AI-powered lead generation system**, enhancing conversion rates by **20%** while also cutting **API costs by 30%**. I refined the prompts through detailed **prompt engineering**, analyzing outputs to ensure more accurate and relevant results. I implemented a **RAG (Retrieve and Generate)**-based solution to optimize the lead generation process. This approach automated **100%** of the previously manual tasks, streamlining the workflow and significantly increasing productivity. My solution-driven methodology transformed a manual, time-consuming process into a fully automated and optimized system.

## PROJECTS

- **2D Virtual Try-On for Clothes** Nov 2024 – Present  
*Python, Deep Learning*
  - Researched on 10+ papers and evaluated 5+ models for **virtual try-on**, addressing deformation and posture preservation issues.
  - Used a **diffusion-based model** to tackle these challenges, outperforming previous methods.
  - Reduced **GPU** resource consumption by 80%, optimizing real-time processing with a custom dataset.
- **Multi-Vendor E-commerce Marketplace** Watch the Demo  
*ReactJS, Django REST, AWS, GCP*
  - Built an **end-to-end wholesale marketplace** from scratch, developing all **APIs** including Search, Order, Seller Analytics, and more.
  - Ensured **Google Search indexing**, implemented seller onboarding, email OTP, and designed SEO-friendly features for a user-friendly experience.
  - Deployed the platform on **AWS, Azure**, using **PostgreSQL, MongoDB, AWS S3**, and **AWS RDS** for data storage.
- **Face Shape Detect** faceshapedetect.com  
*Transfer Learning, Pytorch, Hugging Face*
  - Collected 10k face images, preprocessing and cleaning the data for better model performance.
  - Trained a model by using **transfer learning** to classify face shapes (heart, diamond, etc.).
  - Achieved **85%+** accuracy in classifying face shapes after **fine-tuning** hyperparameters.
- **Linkedin AI Headshot Generator** GitHub Repository  
*AI-powered image generation, Telegram bot*
  - Developed a **Telegram bot** for generating professional AI-based headshots using face swapping and image enhancement.
  - Leveraged **Stable Diffusion** for text-to-image generation and **InsightFace** for face detection and swapping.
- **The Humanize AI** thehumanizeai.pro  
*Next.js, Vercel, OpenAI, Prompt Engineering*
  - Developed an **AI-powered platform** to humanize AI-generated content, improving SEO and engagement.
  - Utilized advanced **prompt engineering** to tailor AI responses and enhance content readability.