Abdullah Ahmad Arslan

GitHub: https://github.com/abdullahahmadarslan Phone: 03334578883

SUMMARY

Computer Scientist with expertise in the MERN stack, Next.js, TypeScript, and Machine Learning, specializing in developing AI-integrated full-stack applications with a strong focus on performance and robustness. Passionate about cutting-edge technologies, writing clean, maintainable code, and leveraging Deep Learning, Generative AI, and Large Language Models (LLMs) to enhance software functionality, intelligence, and user experience.

EXPERIENCE

Pinocchio Cafe: October 2024 – December 2024

• Designed and developed a visually engaging website using React, Bootstrap 5, HTML, and CSS, integrating EmailJS for seamless customer inquiries and deploying it on Namecheap for reliable access.

AA Tech Repairs: December 2024 – December 2024

• Built a responsive website for a UK-based electronics repair startup, ensuring an intuitive design with React and Bootstrap 5, and deployed it on Namecheap for consistent uptime.

AIESEC in Pakistan:

Team Member, Business Development

March 2024 - July 2024

August 2024 - Present

EDUCATION

COMSATS University, Lahore

 $September\ 2022-May\ 2026$

Bachelor of Computer Science

CGPA: **3.79/4**

Punjab Group of Colleges, Main Campus, Lahore

Team Member, Marketing & Public Relations

2020-2021

HSSC Marks: 1089/1100 (99%)
Garrison Boys High School, Lahore

2019–2020

SSC Marks: 1069/1100 (97%) | Gold Medalist

SKILLS

- **Programming Languages:** Java, C++, C, JavaScript, Type Script, Python
- Frontend Development: HTML, CSS, React.js, Next Js, Tailwind CSS, Bootstrap, ShadCN, Material UI
- State Management: Redux Toolkit, Zustand
- **Backend Development:** Node.js, Express.js
- Databases: PostgreSQL, MongoDB, MS SQL Server, Convex DB, Vector Databases(Chroma DB, Pinecone)
- Machine Learning & Deep Learning: PyTorch, TensorFlow, Numpy, OpenCV, Pandas
- Natural Language Processing (NLP): Langchain, RAG (Retrieval-Augmented Generation), Meta LLAMA, OpenAI (GPT), Google Gemini

PROJECTS

SafeChat: Real-Time Communication App with AI-Powered Filtering For Unsafe Images

(GitHub: github.com/abdullahahmadarslan/SafeChat-MERN-DeepLearning)

Tech Stack: Deep Learning, MongoDB, Node.js, Flask, Express.js, React Js, Cloudinary, Multer, Zustand, Bootstrap 5

- Trained a 90% accurate deep learning model on 10,000 images for NSFW/Vulgar images blurring sent as messages, deployed the deep learning model on a flask server and used it as a microservice in the app.
- Utilized WebSockets for instant messaging, real-time friend request management, and live updates of friends' online status.
- Implemented JWT authentication for secure access, Cloudinary for media uploads, and includes robust group functionalities with admin controls and utilized Zustand for efficient state management.

Interview Connect: A Remote Video Calling Interview Platform

 $(GitHub: \underline{https://github.com/abdullahahmadarslan/InterviewConnect}\)$

Tech Stack: NextJs, TypeScript, Clerk Authentication, Convex Database, Stream, Tailwind CSS, ShadCN

- Built with Next.js & TypeScript, integrating Stream, Convex, and Clerk for seamless functionality.
- Implemented video calls, screen sharing, and screen recording for real-time collaboration.
- Secured the platform with authentication & authorization using Clerk and Tailwind CSS with ShadCN for styling.
- Utilized server & client components, layouts, server actions, and dynamic/static routes for efficient architecture.

AI-Powered Facial Recognition Attendance System:

(GitHub: https://github.com/abdullahahmadarslan/Facial-Recognition-Attendance-System)

Tech Stack: Deep Learning, OpenCV, React Js, PostgreSQL

- Leveraging the ResNet50 model and Single Shot Multibox Detector (SSD), a deep learning-based object detection framework for accurate facial detection and identification.
- For Digital Image Processing, utilized OpenCV library for Realtime produced Image Frames contrast enhancements, edges sharpening and brightness adjustments and noise checking.
- Achieving almost 95% similarity between facial vectors utilizing cosine similarity as the comparison metric.

Shoply: An E-Commerce Store (GitHub: https://github.com/abdullahahmadarslan/Shoply-MERN)

Tech Stack: Stripe, React.js, Node Js, Zustand, MongoDB, Recharts, Lucide React, Tailwind CSS

- Developed a web app for managing multiple product categories with customer and admin roles.
- Admin can create, feature, and delete products and see Analytical Reports on daily sales
- Stripe integration for payment management and used Zustand for efficient State management.
- Coupons generation for different customers according to their purchases

MediQuery: A Retrieval Augmented Generation (RAG) Powered Medical Chatbot Built with LLama 2

(GitHub: https://github.com/abdullahahmadarslan/MediQuery-LLAMA2-LANGCHAIN-RAG)

Tech Stack: Langchain, Chroma DB, LLM (Meta LLama 2), NLP, FastAPI, all-MiniLML6-v2 Embeddings Model

- The chatbot utilizes Meta's LLaMA 2 (7B variant) for conversational responses and sentence-transformers/all-MiniLML6-v2 embeddings with ChromaDB for efficient document retrieval.
- LangChain is integrated to streamline component interactions, and FastAPI serves as the backend framework, with a web based user interface.
- MediQuery ensures reliability by sourcing medical knowledge from the Gale Encyclopedia of Medicine.

CERTIFICATIONS

- Web Development Certification Devtown Bootcamp (verification: https://www.cert.devtown.in/verify/Z1Jds16)
- Machine Learning Specialization Coursera (verification: coursera.org/account/accomplishments/specialization/certificate/P9P4VQIMPNZC)