Abrash Arshad

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SUMMARY

Aspiring AI and Machine Learning enthusiast with strong Python skills, DSA knowledge, and experience in libraries like NumPy, Pandas, OpenCV. Currently exploring TensorFlow to build intelligent, real-world systems.

EXPERIENCE

AI Engineering Intern

Shahruh Technologies   **July 2025 – Present, Lahore, Pakistan**

· Engineered and deployed **3+ AI-powered web applications**, including Transformer architecture explainers and a Retrieval-Augmented Generation (RAG) chatbot, supporting real user interaction with AI systems.
· Leveraged Transformer and attention-mechanism principles (2023 updated *Attention Is All You Need*) to **design and implement scalable AI system workflows** used across **multiple user-facing applications**.
· Implemented **image, audio, and video watermarking modules**, contributing to content protection features across **3 distinct media pipelines**.
· Supported **AI system architecture, frontend integration, and rapid prototyping**, accelerating feature validation and reducing development iteration cycles.

PROJECT

Speech Recognition Analysis Tool

University Project · github.com/Abrash-Official/Speech-Recognition-Analysis · April 2025 – May 2025
· Transcribed live audio input to text using SpeechRecognition and PyAudio, enabling real-time speech analysis.
· Measured Word Error Rate (WER) with jiwer to evaluate transcription accuracy and highlight specific errors.
· Processed over 100 audio files, identifying and classifying substitutions, deletions, and insertions in transcriptions.
· Improved recognition performance by up to 20% through ambient noise adjustment and optimized timeout handling.
· Generated a structured HTML report to present transcription results and error insights in a clean, readable format.

Portfolio

Self-Initiated · abrash-official.netlify.app · July 2024 – Present
· Built and deployed a multi-page portfolio using HTML, CSS, and JavaScript, showcasing 6+ academic and technical projects.
· Embedded external links to LinkedIn, GitHub, and email contact, increasing visitor interaction by 40% in the first month.
· Structured content into 4 core sections (About, Skills, Projects, Contact), reducing page exit rate by 30% through improved navigation.
· Implemented responsive design for 100% compatibility across desktop, laptop, and mobile viewports.
· Launched via Netlify, achieving 100% uptime and average loading time under 1.5 seconds for users across 3 regions.
· Regularly updated content to reflect 5+ newly added skills and ongoing project milestones, ensuring relevance and engagement.

Sign Language Recognition (In Progress)

3rd Semester Project · github.com/Abrash-Official/Sign-Language-Recognition-master · January 2025 – February 2025
· Developed a hand gesture recognition model using OpenCV and MediaPipe, achieving 90%+ accuracy on a custom dataset of 300+ images.
· Enabled real-time translation of 10+ common gestures into text, providing instant feedback for hearing-impaired users.
· Trained and tested the model under 3 different lighting conditions, reducing misclassification rates by 25%.
· Optimized processing speed to 30+ frames per second, ensuring smooth gesture detection on mid-range hardware.
· Designed a scalable system architecture for potential deployment on mobile or web-based platforms.
· Improved overall recognition performance through continuous fine-tuning, leading to a 15% boost in gesture classification accuracy.

EDUCATION

Bachelor of Science in Computer Science - CS

Institute for Art and Culture · Lahore, Punjab, Pakistan · October 2023 - October 2027 · 5th Semester (3.6/4)

Faculty of Science, Pre-Engineering

Kips College · Raiwind, Lahore, Pakistan · 2023

SKILLS

Skills: Programming Language:
Python, C++, Vibe Coder

Tools

Technical Skills: Git, GitHub, Numpy, Pandas, Matplotlib, Leetcode

Soft Skills:

Self-Motivation, Initiative, Curiosity, Lifelong Learning, Problem-Solving, Time Management, Goal-Oriented Mindset, Collaboration-Ready