AHMAD SULTAN

SOFTWARE ENGINEER AND TECH TRAINER

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ACHIEVEMENTS

- @Harvard University(CS50x_PuzzleDay_Winner): Our team won 1st place at CS50x Puzzle Day 2024 by solving 9/9 complex puzzles.
- Duolingo English Test: Successfully Obtained 125/160 Score(Which is equivalent to IELTS 6.5 or higher bands).
- @GitHub: Top 16th Pakistani GitHub contributor with 700+ days of coding consistency and numerous achievements.
- @Stanford University(Code_in_Place): Selected as a Section Leader to teach Python to 100+ international students.
- @SMIT: Trained 2,000+ students in different programming languages and technologies.
- @leetcode: Solved 300+ Data Structures and Algorithms problems.[Github link]
- @lablab.ai: Participated in multiple AI International Hackathons and won one of them (Unhallucinate Challenge).
- Guest Speaker at WordSprint Hackathon 3.0: Gave a talk on "Bridging the Gap: From Coding Basics to Real-World Solutions".
- Fully-funded scholarship: Recipient of merit-based fully-funded scholarship in bachelors.

TECHNICAL SKILLS

- Programming Languages: C, C++, Dart, Java, Python, JavaScript (ES6+), TypeScript
- Web Dev: HTML5, CSS3, SCSS, SASS, Bootstrap 5, Chakra UI, Ant Design, React JS(Context API, Router, State Management)
- Mobile Dev: React Native
- Backend: Firebase, Node JS, Express JS, Python, Flask, Django
- · Al: Generative AI, LLMs, RAG (Vectara)
- · Version Control: Git, Github
- APIs: Rest-APIs, GraphQL
- Databases: MongoDB, Firestore

EDUCATION

Montana State University, Bozeman

Jan 2025 - Present

- PhD in Computer Science
- Teaching Assistant: working as a Teaching Assistant, teaching student the java programming language.

The University of Agriculture, Faisalabad

Sep 2020 - Jun 2024

CGPA: 3.35 / 4.00

• Bachelor of Science in Computer Science

FINAL YEAR PROJECT

Al Podcast Generator | HTML, CSS, Bootstrap5, Javascript, React, firebase, Generative AI, LLMs, python | [Github link]

- Created an AI platform to turn text articles and youtube videos into audio podcasts.
- Used Python, OpenAI, and ElevenLabs for content and voice synthesis.
- Designed a user-friendly interface with secure Firebase authentication & Enabled customizable voice options.

Co-Founder & Dev Lead Feb 2024 – Dec 2024

EcoFactor

São Paulo, Brazil · Remote

- EcoFactor uses AI to boost manufacturing sustainability and efficiency, guiding eco-friendly practices and optimizing workflows.[See Software]
- <u>As a Dev Lead</u>, my focus is on the development side of our project ecofactor. I'm handling front-end, AI integration, and backend with my team. We, as Dev members, are working collaboratively on this project. [See CEO Review]
- EcoFactor currently consists of a team of 7 members: 4 from Pakistan, 2 from Brazil, and 1 from Latvia.[see team website]
- Utilizing these technologies to create EcoFactor: HTML, CSS, Bootstrap 5, JavaScript, React, Python, Flask, LLMs, Vectara, RAG.

Tech Trainer Dec 2022 – Present

Saylani Mass IT Training Program

Faisalabad, PK

- <u>Trained</u> 2000+ students to learn programming, DSA(LeetCode), web and mobile app development, and software engineering skills.
- Programming Languages and Technologies: HTML, CSS (Bootstrap 5), JavaScript (ES6), TypeScript, DSA(LeetCode), React JS (Context API, Router, State Management), Next.js, NodeJS (ExpressJS, Authentication, API Endpoint Handling), NPM, MongoDB, Firebase, and React Native.
- Hosting Platforms: Surge, gh-pages (GitHub Pages), Netlify, Vercel, and Firebase.
- See students' reviews about how I impacted their coding(Development) journeys: (<u>Student1</u>), (<u>Student2</u>), (<u>Student3</u>) and many more.
- Students received training from me via these courses. See Github Repositories:
 - * Full Stack Development, Frontend Web Development, Frontend Mobile Development
 - * Backend Development, Web Designing Bootcamp B1, Web Designing Bootcamp B2
 - * Al Chatbot

MERN Stack Developer

Sep 2022 - Mar 2023

ZW Tech

Faisalabad, PK

- Modified React JS front-end for UAE recruitment business website, resembling LinkedIn.
- Developed Node. js-based GraphQL APIs, enhancing data management and integration for Dashboard.
- Led the Desgning team and collaborated with product managers, business partners, and engineers to help define product requirements and roadmap.

MERN Stack Developer

May 2022 - Aug 2022

Faisalabad, PK

Developed and maintained MERN web apps at Seeraht, prioritizing quality, scalability, and efficiency.

- Collaborated with cross-functional teams, implementing complex software features using modern development techniques.
- Experience in integrating web applications with third-party APIs and services.

VOLUNTEER EXPERIENCE

Section Leader Mentor

Apr 2024 – Jun 2024

Stanford University: Code in Place

California, United States · Remote

Santa Clara, California · Remote

- Selected as a Section Leader for Stanford's Code in Place to teach Python to international students in groups of 10-15.
- Later, I was promoted to Section Leader Mentor for one-on-one student support and taught 56 TeachNow sessions.
- I helped 100+ international folks worldwide, including countries like the USA, Canada, Russia, the UK, India, Bangladesh, Brazil, Germany, and others.

Trainer and Moderator

Feb 2023 - Present

<u>iCodeGuru</u>

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- $\bullet \ \ \, \underline{Offered} \ volunteer \ teaching \ in \ Python \ and \ DSA \ at \ iCodeGuru, emphasizing \ LeetCode.$
- Taught course on the Duolingo English Proficiency Test.
- Delivering "Machine Learning from Scratch & Its Privacy Implications" training to underprivileged students.
- Conducting weekly workshops especially to help underprivileged students to learn freely.[See here]
- See students' reviews about how I impacted their coding(DSA + LeetCode) journeys: (<u>Student1</u>), (<u>Student2</u>), (<u>Student3</u>) and many more.

HACKATHONS AND COMPETITIONS

Harvard's CS50x Puzzle Day 2024 | [LinkedIn link]

- Led a 5-member team to 1st place at Harvard's CS50x Puzzle Day 2024.
- Solved 9 complex puzzles using deep logical thinking and teamwork.
- Collaborated with international members from Greece, Nigeria, and Pakistan.

Neue View | HTML, CSS, Bootstrap5, Javascript, React, Open Al Model GPT-3.5 Turbo, OCR, Trulens, Pinecone, python, Flask | [Github link]

- AI-Powered Web-Based OCR Solution for Digitizing and Analyzing Handwritten Information.[LinkedIn link]
- The Neue View Project involved a team of six individuals from United States and Pakistan. The [lablab.ai submission link]
- Managed the whole development project.
- Senior dev: frontend Design, backend design(rest api's creation using python and flask), backend and Al integration.

Full Stack Real Estate Mobile App | Javascript, ReactNative, Redux, ContextAPI, NodeJS, ExpressJS, MongoDB | [Github link]

- Participated in a national hackathon at Saylani Mass IT Training Program in August 2022.
- Project with authentication, dashboard, property management, searching, browsing and call-to-action feature for property tansactions, powered by REST APIs using Node JS.

Coding Competitions

Qualified for: "Google Code Jam 2023 and Meta Hacker Cup 2023".

PERSONAL PROJECTS

Plant Disease Detection System | Python (Flask, TensorFlow, Keras, OpenCV, Pillow, NumPy, Matplotlib, Seaborn) | [Github link]

- Developed and deployed a Flask web application to detect plant diseases from leaf images using a trained convolutional neural network (CNN).
- Preprocessed and augmented a comprehensive dataset of plant leaf images, categorized into healthy, powdery mildew, and rust classes to enhance model accuracy.
- Designed and trained the CNN model using TensorFlow and Keras, achieving high accuracy in classifying plant diseases.
- Implemented image processing techniques with OpenCV and Pillow to handle image uploads and preparation for prediction in the web application.

Full Stack Bank WEB APP | HTML, CSS, Bootstrap5, Javascript, React, Context API, Firebase, Firestore | [Github link]

• Bank-App is a web application allowing users to manage accounts, perform transactions, and view transaction history conveniently.[Live link]

Full Stack E-Commerce Mobile App | Javascript, ReactNative, Redux, ContextAPI, NodeJS, ExpressJS, MongoDB | [Github link]

• E-commerce mobile app with user registration, product catalog, cart, wishlist, checkout, payment, order tracking, and admin dashboard.

REFERENCES

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