Muhammad Haris Ahsan

Software Engineer

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Achievements

- *@GitHub:* Achievements Repository, contains approximately all my achievements of this journey.
- *@leetcode:* Solved 170+ Data Structures and Algorithms problems.[Github link]
- *@Lablab.ai:* Competed in global AI hackathons, showcasing innovative solutions.
- *@Devpost:* Engaged n international hackathons, solving real-world challenges.
- *@Generative Ai:* Participated in the 'Build with AI' global hackathon, exploring AI-driven innovations.
- *@M{IT}^{2}:* Participated in 'Winter Contest' coding competition.

Technical Skills

- *Programming Languages:* JavaScript (ES6+), TypeScript, Python, C, C++
- *Web Dev:* HTML5, CSS3, SCSS, SASS, Bootstrap 5, TailwindCSS 4, Shadcn UI, Ant Design, React JS(Context API, Router, State Management)
- *Backend:* Firebase, Node JS, Express JS
- *Version Control:* Git, Github
- *Databases:* MongoDB, Firestore

Education

Government College University Faisalabad Dec 2022 - Present

Bachelor of Sciences in Computer Science

- CGPA: 2.87 / 4.00 - till 3rd semester – 5th semester - ongoing

Volunteer Experience

Trainer and Moderator August 2024 – Present

iCodeGuru *Santa Clara, California · Remote*

- Delivered Python lectures to underprivileged students, making coding more accessible.
- Taught Data Structures & Algorithms (DSA), focusing on problem-solving and LeetCode mastery.

Hackathons and Competitions

Advent of Code 2024 | [LinkedIn link]

- Completed all 25 days of Advent of Code 2024, tackling progressively challenging questions.
- Optimized solutions using dynamic programming, graph traversal, and bitwise operations.
- Ranked among top global participants, demonstrating speed, efficiency, and problem-solving skills.

LabLab AI - AI for Connectivity Hackathon | [LinkedIn link]

- Competed in a global hackathon with a 5-member team from UAE, Rwanda, and Pakistan.
- Developed an AI-powered solution to improve digital connectivity and network efficiency, focusing on real-time data transmission and accessibility.
- Utilized LSTMs, Transformers (BERT/GPT), and Reinforcement Learning for data processing, NLP, and adaptive decision-making. Applied Embedding Models for analyzing user-uploaded profiles.
- Presented a working prototype to judges, highlighting its scalability and real-world impact in enhancing connectivity.

GenAI - BuildWithAI Hackathon | [LinkedIn link]

- Collaborated in a team of 8 participants from the US, New Zealand, Switzerland, Germany, and Pakistan.
- Developed an AI-powered chatbot using Generative AI technologies to provide efficient solutions.
- Integrated cutting-edge AI models and collaborated with mentors to refine project ideas.

- Showcased the chatbot's capabilities, emphasizing real-world applications and scalability.

Devpost - XR Design Hackathon | [LinkedIn link]
- Collaborated in a team of 6 with participants from the US and Pakistan to create an immersive XR experience.
- Developed a React website, a Flutter mobile app, and a GenAI app as part of the project.
- Integrated cutting-edge technologies to create an interactive, cross-platform experience.
- Showcased a functional prototype, demonstrating the potential of XR in real-world applications.

MM{IT}^{2} Winter Contest 2025 | [LinkedIn link]
- Competed in a global coding contest with a team of 3 participants.
- Secured 94th place worldwide out of 7000+ participants, showcasing strong problem-solving skills.
- Collaborated to solve algorithmic challenges and optimized solutions under time constraints.

LabLab AI - AIstronauts: Space Agents on a mission Hackathon | [LinkedIn link]
- Developed an AI-powered system to autonomously monitor and optimize critical resources for astronauts in space and disaster-affected communities on Earth.
- Implemented real-time tracking of oxygen, food, power, communication systems, and astronaut health vitals.
- Designed a survival time prediction model using ML to forecast resource usage and issue emergency alerts for proactive crisis management.
- Optimized resource distribution strategies for space missions and disaster relief operations.

LabLab AI - Fall in Love with Deepseek Hackathon | [LinkedIn link]
- Partnered with a multinational team of six, representing Romania, France, Benin, India, and Pakistan.
- Developed "Comic Me," an AI-powered storytelling platform that transforms text prompts into illustrated comics.
- Utilized Stable Diffusion, React.js, and cloud-based AI processing to generate high-quality, multi-style comics instantly.
- Built a scalable, interactive prototype and showcased its impact on democratizing comic creation through AI.

Projects

CosmoLearn | HTML, CSS, JavaScript, React, TailwindCSS, Python, Flutter, GenAI, XR, AR, VR, Hugging Face
- Developed an XR, AR, and VR educational platform for exploring the solar system.
- Created interactive 3D solar system experiences to simplify complex astronomical concepts, enhancing student engagement.
- Built a multi-platform solution with a web app and mobile app, integrated with GenAI for enhanced learning.
- Led development, ensuring seamless compatibility across platforms and delivering a live demo for global audiences.

- **Live Demo:** Web Demo
- **GitHub Repository:** Website UI | Mobile App

Smart Network Planning | Machine Learning, Vector Search, Large Language Models (LLMs), Milvus, Streamlit, AI, Data Science
- Developed a 5G deployment solution leveraging ML, LLMs, and vector search for optimized network planning and improved connectivity.
- Implemented AI-driven resource allocation and traffic balancing, optimizing 5G network deployment to reduce inefficiencies.
- Automated complex tasks like network analysis and site selection, saving time and reducing errors in 5G planning.
- Designed scalable architecture using Milvus for efficient processing of large datasets, ensuring seamless performance.

- **Live Demo:** live link (login:'admin', pass:'admin@123')
- **GitHub Repository:** GitHub link

AURAFem | Python, Streamlit, NLP, Machine Learning, AI, Chatbot Development
- Developed a FemTech web app for ovarian cancer with personalized AI-powered health support.
- Created a conversational AI-agent using NLP for human-like responses and machine learning for continuous improvement.

- Implemented emotional intelligence to enhance user interactions with empathetic responses.
- **GitHub Repository:** GitHub link

ARMS – Autonomous Resource Management System | AI, Machine Learning, Generative AI, Real-Time Analytics, Crisis Management

- Developed an AI-powered system to autonomously track and optimize critical resources for astronauts and disaster-affected communities.
- Implemented real-time monitoring of oxygen, food, power, and communication systems, ensuring efficient survival strategies.
- Integrated machine learning models to predict survival time based on resource usage and astronaut health data.
- Designed emergency alert mechanisms to notify mission control or emergency teams in critical situations.

- **GitHub Repository:** GitHub link
- **Live Demo:** ARMS UI

Comic Me – AI-Powered Comic Creation | AI, Generative AI, Text-to-Image, Cloud Processing, Web Development

- Developed an AI-driven storytelling platform that transforms text prompts into illustrated comics within seconds, making high-quality comic creation accessible.
- Implemented cloud-based AI processing and database management to ensure seamless performance and scalability.
- Integrated **Stable Diffusion** for text-to-image and image-to-image transformations, enabling multi-style comic rendering.
- Enabled real-time editing, instant export (PDF/PNG), and social media sharing features for users.

- **GitHub Repository:** GitHub link
- **Live Demo:** Live link