

# Harris Ahmad

Lahore 54792

[harris.ahmad55@gmail.com](mailto:harris.ahmad55@gmail.com)

923003721112

As a skilled Software Engineer with a Bachelor's in Computer Science from LUMS, I specialize in backend and full-stack development. I have a proven track record of building scalable, efficient systems and applications for high-profile clients like Walmart, Starbucks, and JLL. My expertise spans FastAPI, MongoDB, Redis, and ExpressJS, among other technologies. Notable projects include developing an asset management tool that enhanced application efficiency by 28%, creating a cross-platform health app, and leading a research project that significantly reduced data retrieval time. With a strong foundation in both academic research and practical implementation, I bring a results-driven approach to every project.

## Work Experience

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### Software Engineer

Entronix.io-Dallas, TX

July 2024 to Present

- Developing scalable server-side solutions using FastAPI for robust APIs and optimized database performance.
- Building an asset management software for top-tier capitalist firms like Walmart, Starbucks and JLL to help them manage their assets.
- Currently we're on grounds to building an asset management software for one of our highly reputed clients, Walmart. I have worked exclusively on the system debug info page where the root users/ admins of the product can glance into the system's debugging information which leveraged the efficiency of our application by 28%.

### Backend Developer

Its IT Group-Remote

May 2024 to Present

Technologies Used: PostgreSQL, MongoDB, ExpressJS, GraphQL, Redis, Azure DevOps GitHub Actions

- Developing scalable server-side solutions using MERN & GraphQL for robust APIs and optimized database performance.
- Working on an ExpressJS web server integrated with a Swift iOS app for estimating construction costs.
- The app uses iPhone/iPad's LiDAR scanner to get room dimensions, which are sent to the server for cost estimation.

### Research Assistant

Networks and Systems Group-Lahore

June 2022 to May 2024

- Conducted a study on YouTube ad costs, revealing hidden expenses and contributing to internet affordability insights.
- Presented research at ACM WebConf and ACM CoNEXT, enhancing global scholarly discourse.
- Led technical development, fostering innovation and collaboration.

### Full Stack Developer

LUMS-Lahore

October 2023 to March 2024

Technologies Used: Cross-platform development, Vektored database, Chatbot integration, ReactJS, SASS, Flask

- Created a cross-platform app for health practitioners to record medical and socioeconomic history.
- Implemented EMRs with an optimized vectored database for patient data management.
- Integrated a chatbot for patient medical advice.

### **Full Stack Developer**

Interactive Media Lab-Lahore  
October 2023 to March 2024

- Developed a scalable, fault-tolerant system using Quart/Flask, reducing data retrieval time by 10x.
- Implemented Amazon Lambda Functions and DynamoDB, enhancing system efficiency.
- Led a team, improving project delivery time.

### **Teaching Assistant - Distributed Systems**

Lahore University of Management Sciences (LUMS)-Lahore  
September 2023 to December 2023

- Led discussions on systems-related research papers, enhancing students' analytical skills.
- Supported students with Go Lang programming assignments, achieving over 95% assignment completion.
- Delivered tutorials on the Raft consensus algorithm, improving student comprehension.
- Managed weekly office hours, providing tailored academic guidance.

### **Backend Developer**

LUMS-Lahore  
January 2023 to December 2023

Technologies Used: Python, Socket programming, Web Sockets, Distributed hash tables, Consistent hashing

- Built a resilient P2P file sharing app using Python and socket programming.
- Implemented distributed hash tables and consistent hashing for optimized file retrieval.

### **Teaching Assistant - CS 200**

Lahore University of Management Sciences (LUMS)-Lahore  
January 2023 to December 2023

- Conducted office hours for 210 students, fostering a supportive learning environment.
- Led programming labs on C++ Object-Oriented Constructs, enhancing hands-on learning.
- Ensured accurate and timely grading for quizzes and exams.

### **Frontend Developer**

LUMS-Lahore  
May 2023 to June 2023

Technologies Used: HTML, TailwindCSS, JavaScript

- Developed and designed a dynamic course website for a 5-day Internet Architecture course at LUMS.
- Enhanced accessibility and resource management for over 60 participants.

### **Backend Developer**

LUMS-Lahore  
June 2022 to December 2022

Technologies Used: MERN (MongoDB, ExpressJS, ReactJS, NodeJS), GitHub Actions, Heroku

- Developed a robust full stack speech therapy web application using MERN stack.
- Designed a user-centric platform to enhance therapy sessions and exercises.
- Integrated 3rd-party APIs such as Calendly and RapidAPI's quote generator.

## **Machine Learning Developer**

Fiverr-Lahore

January 2021 to December 2021

Technologies Used: Naive Bayes, Linear Models, BERT, RNNs, LSTMs, scikit-learn, TensorFlow, Keras, PyTorch

- Conducted experiments with various ML models and frameworks.
- Cleaned and analyzed a large dataset, comparing model performances using F1-score and accuracy.
- Developed an end-to-end system and considered future advancements with GPT-4 or LLaMA 2.

## Education

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### **Bachelor's of Science in Computer Science in Computer Science**

School of Science and Engineering - Lahore

September 2020 to June 2024

### **A'levels in Engineering**

Lahore Grammar School Paragon Campus - Lahore

August 2018 to May 2020

### **O'levels in Engineering**

Lahore Grammar School - Lahore

August 2015 to May 2018

## Skills

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- SQL, GraphQL
- Python, C/C++, JavaScript, TypeScript, Haskell, Bash, PowerShell, Go Lang,
- Flask, Django, ExpressJS, ReactJS, NumPy, SciPy, Pandas, Selenium, NextJS
- AWS, Azure, Git/ GitHub, Linux, Postman, Android Studio
- Microsoft Office
- Communication skills
- Leadership
- Organizational skills
- Administrative experience

## Languages

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- English - Expert
- Urdu - Native

## Links

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<https://github.com/harris-ahmad>

<https://www.linkedin.com/in/harris-ahmad-9a6266214/>

## Certifications and Licenses

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### **Data Analysis with Python**

July 2021 to Present

### **Scientific Computing with Python**

July 2021 to Present

### **System Architecture and Clean Code Design in OOP**

July 2021 to Present

### **JavaScript Algorithms and Data Structures**

June 2021 to Present

## Publications

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### **Uncovering the Hidden Data Costs of Mobile YouTube Video Ads**

<https://dl.acm.org/doi/10.1145/3589334.3645496>

May 2024

Emaan Atique, Saad Sher Alam, Harris Ahmad, Ihsan Ayyub Qazi, and Zafar Ayyub Qazi. 2024. Uncovering the Hidden Data Costs of Mobile YouTube Video Ads. In Proceedings of the ACM on Web Conference 2024 (WWW '24). Association for Computing Machinery, New York, NY, USA, 1138-1148. <https://doi.org/10.1145/3589334.3645496>