# HAASHIM ALI MIRZA

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## EDUCATION

**University of Michigan School Of Information (UMSI)**                                                        **Ann Arbor, MI**
*Master's of Science: Information Science, Concentration in Data Science and Big Data Analytics*          *April 2025 (expected)*
- **Relevant Courses:** Information Retrieval, Consulting Foundations, SQL and Databases, Responsive Web Design, Statistics and Data Analysis..

**Lahore University of Management Science (LUMS)**                                                        **Lahore, Pakistan**
*Bachelor's of Science: Computer Science*                                                                      *June 2023*
- **GPA:** 3.72, Graduated with High Distinction.
- **Relevant Courses:** Machine Learning, Deep Learning, Data Science, Computer Vision, Operating Systems, Speech Processing, Network Security.

## PROFESSIONAL EXPERIENCE

**Machine Learning Backend Development Intern**                                                        **September 2023 – Present**
*ITS University of Michigan*                                                                                    *Ann Arbor, MI*
- Engineered and optimized educational machine learning tools on the LangChain platform using Python, leveraging the advanced capabilities of GPT-4.0 Large Language Model (LLM).
- This initiative resulted in a significant enhancement of faculty research experiences through the automation of CSV and SQL analysis, effectively reducing analysis time by 60%.

**Principal Researcher**                                                                              **June 2022 – Present**
*Religious Anger Management Solution- Senior Year Project*                                                      *Ann Arbor, MI*
- Devised design recommendations for a novel digital solution for predominantly Islamic Countries like Pakistan to help people be more in touch with their emotions.
- Led end-to-end coordination of human subjects research, utilizing Python for thematic and exploratory data analysis; identified and analyzed emotional needs of the population, resulting in data-driven design recommendations derived from axial coding results.
- Engaged in the development of a prototype chatbot using LangChain to assist with mental health problems.

**Research Assistant, Data Analyst**                                                                  **December 2021 – Present**
*SuperAbbu Project at CSaLT LUMS/University of Michigan*                                                        *Lahore, Pakistan*
- Successfully conducted a detailed thematic analysis and data manipulation on 3500+ voice files using Python, Pandas, Seaborn and Matplotib, exhibiting proficiency in coding, data management, and analysis techniques.
- Utilized the SuperAbbu Interactive Voice Response System as a novel data source, highlighting innovative thinking and adaptability to different data collection methods.
- Co-authored a publication pertaining to Sex-Ed information needs of people in rural areas, currently under review in ACM CSCW.

**Research Assistant, Data Analyst**                                                                  **Jan 2023 – June 2023**
*Youtube Kids Appropriateness Research LUMS*                                                                    *Lahore, Pakistan*
- Performed extensive qualitative and quantitative analysis on 6000 advertisements using Python (Pandas, Seaborn) towards a research publication examining the appropriateness of advertisements within YouTube Kids' content, presently under review for publication.

**Teaching Assistant**                                                                                **September 2021 – May 2023**
*Computer Science Courses, LUMS*                                                                                *Lahore, Pakistan*
- Efficiently designed and implemented assignments and quizzes while regularly conducting educational tutorials for approximately 200 students in the following courses: Introduction to Programming, Fundamentals of Computer Systems, Data Structures, Data Science.

**Software Development Intern**                                                                        **June 2021 – August 2021**
*BIRL LUMS*                                                                                                     *Lahore, Pakistan*
- Enhanced TISON technology at BIRL, Lahore, focusing on cancer therapeutics and optimized a .NET framework website with MySQL database, boosting system performance by 20%.
- Performed daily unit testing to verify accurate biomolecular network generation. Expertly identified and resolved over 40 significant and minor codebase complexities, ensuring smooth project operations.

## ACADEMIC PROJECTS

**Lightweight Deep Learning Model for Tuberculosis Detection**                                        **January 2023 – May 2023**
- Designed a lightweight deep learning model using vision transformers with PyTorch and OpenCV.
- Successfully achieved over 90% accuracy in identifying tuberculosis from images in the NHI Chest X-ray dataset, significantly making medical diagnostics more accessible.

**Automated Lane Detection System**                                                                  **September 2022 – December 2022**
- Leveraged YOLOv, OpenCV, and TensorFlow to develop a computer vision system for automatic lane detection, achieving 97% accuracy. This system holds potential to substantially improve roadway safety measures in Pakistan.

**"Talba" Web Application**                                                                           **January 2022 – May 2022**
- Developed 'Talba', an e-learning platform built using React.JS, Express.js, Node.js and MongoDB while being hosted on Firebase for sharing and building personalized courses. As a testament to its success, it now hosts over 10 diverse courses.

## SKILLS

**Skills:** Python (NumPy, Pandas, Keras, TensorFlow, PyTorch, MatPlotlib, Langchain, Flask, OpenCV), JavaScript (ReactJS, MongoDB, Express.js, Node.js), SQL, C/C++, MATLAB, LaTeX, HTML5, CSS, Haskell, R, C#, Figma, Proteus, Adobe Suite, MS. Office, Git, Github, Firebase.

**Certifications:** University of Michigan: Responsible Conduct of Research and Scholarship Training, University of Michigan: PEERRS Human Subjects Protection, AWS Cloud Practitioner Essentials, Nvidia Deep Learning Institute: Fundamentals of Deep Learning.