Asad Muhammad

[GitHub](#) | [LinkedIn](#) | Phone: (92) 318-2340341 | E-Mail: asadmuhammad519@gmail.com

EDUCATION

Habib University, *B.S. Computer Science*, 3.92/4.0 CGPA   Karachi, PK | **Expected Graduation May 2025**
Awards and Honours: 80% Merit Scholarship, Dean's List Fall 2022, Spring 2023
Fall 2023, President's List Fall 2023

Nixor College, GCE A-levels   **Karachi**, PK | Class of 2021
Awards and Honours: 100% Merit Scholarship

INDUSTRY EXPERIENCE

10Pearls, *Software Quality Assurance Intern*   **Karachi**, PK | June-July 2024
- Developed a novel deep learning-based system utilizing Transformers to automate bug severity prediction
- Designed and executed automated tests using Selenium and Cypress
- Collaborated on Agile teams, creating user stories and ensuring high-quality software solutions

Continental Biscuits Limited, *IT Intern*   **Karachi**, PK | June 2024
- Leveraged Power BI to visualize transport patterns, informing data-driven insights and optimizing logistics operations.
- Utilized large-scale logistics data from SAP to train transformers for forecasting transportation demand and predicting supply chain bottlenecks
- Demonstrated expertise in data preprocessing, feature engineering, and model evaluation, and data analytics

RESEARCH EXPERIENCE

Habib University, *Research Assistant*   **Karachi**, PK | June 2023-Present
Kinematic Calibration of Phantom X Robot Pincher Arm
- Conducted research on kinematic calibration of a robotic arm using computer vision and image processing techniques
- Utilized Python libraries such as OpenCV, NumPy, and SciPy to develop and implement calibration algorithms
- Successfully calibrated the robotic arm, achieving accurate kinematic parameters
Comparative Analysis of Modern Graph Databases
- Led comparative analysis of graph databases for social network analysis and machine learning tasks
- Developed evaluation framework, assessing efficiency and limitations

NOTABLE PROJECTS

AI-Powered Smart Resume Screening Application
- Developed HireHub, a Next.js-based Applicant Tracking System leveraging Large Language Models (LLMs) to automate CV screening and ranking for recruiters
- Built a modular, user-friendly front-end in Next.js, ensuring seamless functionality and compliance with GDPR standards
- Designed and implemented a secure, scalable database schema and integrated AI-driven NLP algorithms for advanced resume parsing and candidate matching

Event Management Web Application
- Spearheaded the development of a comprehensive MERN stack event management website, completing the project within a rapid 20-day timeframe following requirements gathering
- Engineered a secure admin portal utilizing robust password hashing, enabling granular control over event data (adding, deleting, approving, updating)
- https://www.superconnectorservice.com/

Research Video Synthesizer
- Developed an innovative app combining YouTube caption extraction and ArXiv knowledge base for real-time video summarization and research paper recommendations
- Leveraged advanced NLP techniques to synthesize educational content and identify domain-specific academic literature by suggesting research papers based on video content
- Designed end-to-end functionality using Phidata agents, PostgreSQL vector databases, and Python automation for scalable research workflows

SKILLS & INTERESTS

Technical Skills: Numpy, Pandas, PyTorch, TensorFlow, Next.js, React.js. SQL, MongoDB, Python, C, C++, LLMs
Soft Skills: Adaptability, Flexibility, Leadership, Communication, Effective Presentation Abilities, Problem-Solving
Interests: Hackathons, LeetCode, Open-source Contributions, Kaggle