

Muhammad Haseeb Ashraf

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Objective

As an ambitious computer science student with a deep-seated passion for innovation, I am shaping my journey in artificial intelligence with a robust academic background. Now in my 7th semester, I maintain a cumulative GPA of **3.71/4.0**, showcasing my relentless pursuit of knowledge and excellence in this dynamic field.. Passionate about harnessing the power of Natural Language Processing (NLP) to revolutionize the medical field, I am eager to develop and implement AI-driven solutions that enhance patient outcomes and streamline healthcare processes. With a commitment to leveraging cutting-edge technologies, I aim to contribute to transformative projects that make a meaningful impact in the realm of healthcare.

Experience

Research Assistant

FAST-NUCES

Feb 2024 –

Present

- Proposed an Adaptive Access Control System **GB-ACL** for securing SDN-controlled IoT networks, integrating game theory for strategic decision-making and utilizing blockchain for dynamic, immutable ACL policies.

Research Writer

FAST-NUCES

Aug 2024 –

Sep 2024

- Conducted sentiment analysis to detect and categorize gamic tweets as abusive or non-abusive. Here, I used the BERT model for the best classification.

Teaching Assistant

FAST-NUCES

- Programming Fundamentals**
- Data Structures and Algorithms**
- Object-Oriented Programming**

Spring 2023

Fall 2023

Spring 2023

- Arranged vivas, prepared quizzes and assignments, and aided students in exam preparation and understanding core concepts like the designing, implementation and evaluation of the algorithm, how to design systems by view them as object, code ethics and basic industry norms, how to communicate with computer, how to breakdown a problem, how to do problem solving, how to find solution for it?
- Assisted over **350+** students over **32** weeks, receiving positive feedback from teachers on performance and student satisfaction

Web Development Intern

Qbatch

Jul 2022 – Aug 2022

- Developed a freelancing model while gaining web development skills (Ruby on Rails MVC), industry culture, communication, and professionalism.

International Experience

Teaching Assistant Data Analyst

Leading Edge Skills | Remote (USA) | Unpaid

Jul 2023 –

Aug 2023

- Assisted international **30+** students from the USA, India, and Nigeria in grasping Data Analytics concepts.

Education

FAST-National University of Computer and Emerging Sciences

Sep 2021 - Jun 2025

- BSc Computer Science, **CGPA: 3.71**
- **Course Work:** Programming Fundamental, Object Oriented Programming, Data Structure, Design and Analysis of Algorithm, Database, Operating System, Computer Network, Artificial Intelligence, Natural Language Processing, Information Security, Probability and Statistics, and Theory of Automata.

Projects

Med Script | FYP

[NextJs, Node.js, MongoDB, REACT, llama, Open.AI API integration, REST API, LLMs]

- Developing Med Script, a Data as a Service (DaaS) system that collects real doctor-patient data, transcribes conversations, provides data to researchers and companies for better healthcare solutions, prescribes patients cheap medication with high quality, recommends tests and generates a checklist to assist doctors in making accurate, informed decisions. This project is expected to be used by **175,600+** doctors and aims to reduce paper usage and frauds in medicine prescription.

Adaptive ACL | Research

[Solidity, Game Theory, Three-way decisioning, SDN, ACL]

- Designed an adaptive Access Control System **GB-ACL** for securing SDN-controlled IoT networks, utilizing game theory for rational decision-making and blockchain to ensure robust, immutable ACL policies that dynamically update based on user activity.

Game Abusive Classification | Research

[Python, NLP, NER, LDA, BERT, Sentiment Analysis]

- Researched and analyzed abusive language in online gaming communities through sentiment analysis and topic modeling, utilizing BERT for sentiment classification and Latent Dirichlet Allocation (LDA) to uncover hidden topics, offering insights to enhance game development and community management.

Urdu Text Classification

[ML, Data Preprocessing, TF-IDF, Word2Vec]

- Made an NLP pipeline for Urdu sentiment analysis, achieving 90% accuracy in classifying social media posts as positive, negative, or neutral despite challenges like text complexity and noisy data.

Text Summarization Fine Tuning

[GPT2, Llama3, BART, SLURM]

- Fine Tuned on my datasets for better performance of GPT2, Llama3, and BART.

Car Price Prediction

[Data Preprocessing, Statistics, Flutter, ML]

- Implemented a desktop app using Flutter and ML algorithms to predict car prices accurately.

Climate Change Analysis

[Tableau, PowerBI, SQL, Excel]

- Conducted global climate analysis using Tableau, Python, SQL, and Excel, providing insights and suggestions to Lead Edge Skills (LES).

Freelancing Model

[ROR, SQLite3, HTML, CSS, JS]

- Completed a web application using Ruby on Rails and SQLite3 for gig/project hiring with integrated review/rating features.

Text Editor

[C#, C++, Huffman Encoding]

- Created a text editor using C++ and C# .NET, implementing data structures and Huffman encoding for efficient data storage.

Core Competencies

- Generals:** C/C++, Python, Git
- Data Analytics & Databases:** MySQL, Oracle, PowerBI, SQL, Looker Studio, Tableau
- Web Development:** HTML, CSS, Bootstrap, JavaScript, Rails, NodeJS, AJAX, SQLite3, MongoDB, *FastAPI*
- Android Development:** Android Studio, Java, Firebase, SQLite, Postman
- AI/ML:** EDA, scikit-learn, Jupyter, Google Colab, Pandas, Numpy, Feature Extraction, Data Cleaning and Preprocessing, SLURM
- Research:** LaTeX, research writing, SLR preparation, Problem Solving and Analysis

Achievements

- Qualified for ICPC 2024, on Campus
- Qualified FAST Problem Solving Challenge (FPSC) 2024
- Bronze Medal
- Dean's List (Six consecutive semesters)
- Qualified for ICPC 2021, on Campus
- Awarded Leading-Edge Skills Scholarship in Data Analytics

Certifications

- Leading Edge Skills American Program Certified Data Analyst

Community Participation & Leadership

- Technical Head, FAST Cybersecurity Society
- General Body Member, FAST Club of App Development
- Member, MLSA (Microsoft Learn Student Ambassador)

