

# Zoha Hayat Bhatti

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## EDUCATION

**Bachelor's in Computer Science**, Lahore University of Management Sciences

Aug 2020 - June 2024

CGPA: 3.85 | Major GPA: 3.89

Relevant Coursework: Databases, Software Engineering, *Human-Computer Interaction*, *Network Security*, Network Centric Computing, Operating Systems, Advanced Programming, Algorithms, *Machine Learning*, *Data Mining*, Data Structures, *Speech and Language Processing*. [\*Italicized are grad level courses]

## PROFESSIONAL EXPERIENCE

**Data Science Intern** | *British Airways*, Forage

Aug 2023

- Conducted web scraping and built predictive models using Python and machine learning to analyze customer reviews and buying behavior; developed and presented data-driven insights to influence business decisions and customer acquisition strategies.

**CyberSecurity Intern** | *Mastercard*, Forage

Aug 2023

- Designed a phishing email simulation and interpreted results to develop security awareness training; presented data-driven insights to improve phishing prevention, enhancing problem-solving, technical security awareness, and strategy skills.

**Teaching Assistant** | Lahore University of Management Sciences

Aug 2022 - May 2024

- Databases (CS-310): Head Teaching Assistant** for a class of **200** students, managing a team of 7 teaching assistants. Lead TA for the programming assignment on creating a mini database management system incorporating a query parser, b+ trees and hashtable storage and able to perform CRUD operations whilst ensuring concurrency and recovery of the data. Delivered tutorials on database management systems and their operations. Overlooked the web development course project (**Node, Javascript, HTML**) for a set of assigned students.
- Network Security (CS-473): Head Teaching Assistant** for a class of **100** students, managing a team of 5 teaching assistants. Lead TA for the assignment on click-jacking and CSRF attacks where students had to bypass simulated scenarios. Lead TA for practical lab content on Data Encryption and Certificate Authority. Delivered tutorials on using block ciphers to encrypt and decrypt data.
- Computational Problem Solving (CS-100): Head Teaching Assistant** for a class of **150** students, managing a team of 7 teaching assistants. Designed programming assignment manuals, conducted tutorials for basic programming concepts in C++, and overlooked the programming course project for a set of assigned students.

## PROJECTS

- Machine Learning for Content Moderation and Toxicity Classification:** Developed a content moderation and toxicity classification system using machine learning models like Naive Bayes, RNNs, and BERT, leveraging the Jigsaw Toxic Comment Classification Dataset to enhance online safety.
- Paktree Website:** Created a dynamic website for a non-governmental organization using **HTML, CSS, React, Node.js, MongoDB, and JavaScript**, resulting in a robust and responsive digital donation platform.
- Ehsaas - AI-Based Chatbot Prototype:** Designed a **Figma** prototype for a postpartum depression screening app, including login, signup, questionnaire screens, homepage, and tabs for medical assistance and resources.
- Fake News Detector:** Developed a browser extension to classify highlighted text as true or false using a fine-tuned **Llama-3 Large Language Model**, supplemented by **DuckDuckGo** and **Google Fact Check API** for a fakeness rating.
- Data Analysis of US Election Tweets 2020:** Executed data analysis on the 2020 US Election tweets dataset using techniques such as exploratory data analysis, principal component analysis, feature extraction, and data cleaning.
- Hotel Management System:** Designed and developed a hotel management system with frontend and backend components using **HTML, CSS, React, Node.js, MySQL, JavaScript**.
- Race Car Game:** Engineered a racecar game entirely in **C++** as part of a course project, showcasing dynamic gameplay mechanics.

## EXTRA-CURRICULAR ACTIVITIES

- LUMS Women in Computing:** Organized Python programming bootcamps for high school girls and led the ambassadorship program, fostering greater participation and inclusivity in computing.
- Institute of Electrical and Electronics Engineers (IEEE) at LUMS:** Coordinated and promoted international coding hackathons, successfully inviting participants from around the world to engage in competitive programming.

## HONORS AND AWARDS

**Deans Honor List Award** | Lahore University of Management Sciences

2020 - 2024

**Honorable Mention for proposing a space settlement called 'Pardes'** | NASA AMES

2019

## SKILLS

**Programming Languages:** Python, C/C++, JavaScript, TypeScript, Haskell, SQL, HTML/CSS

**Developer Tools:** Git, Docker, Selenium, Puppeteer, Figma, Trello, MongoDB, Heroku, Netlify

**Miscellaneous:** React, Node.js, NumPy, Pandas, PyTorch, TensorFlow, Bash, Keras