Nazia Hassan

Student
Bachelor of Technology
Indira Gandhi Delhi Technical University for Women, New Delhi

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GitHub Profile
LinkedIn Profile

Education

- **Bachelor of Technology in Computer Science and Engineering** *2026*
  Indira Gandhi Delhi Technical University for Women, New Delhi CGPA: 8.02
- **Senior Secondary** *2022*
  Jai Hind Public School, New Delhi Percentage: 85.4

Experience

- **SAG - DRDO — Certificate** *May 2024 - July 2024*

  Research Intern
  - Collaborated with scientists at DRDO to develop and optimize advance machine learning models for cryptographic applications for increased efficiency and performance.
  - Built a cryptographic system using TensorFlow, integrating three Transformer models (Alice, Bob, and Eve) to enable secure communication between Alice and Bob while reducing Eve's prediction accuracy by 50%.
  - Used **matplotlib** for data analysis and evaluation, obtaining optimal results with a message size of 20.
  - Analyzed cryptographic model performance using Matplotlib, achieving a 99% accuracy rate for the Bob model on message sizes of 20 characters.
  - **Key topics: Machine Learning in Cryptography, Performance Analysis**

Projects

- **Vyapaar-e — Live — GitHub** *Jan 2025*
  - Developed a full stack web platform for small businesses to get insights and recommendations on their financial condition to make informed decisions.
  - Implemented an LSTM-based ML model for stock price predictions and financial recommendations.
  - Integrated Web3 technology with smart contracts (Solidity) for secure, decentralized subscription model and seamless transactions via MetaMask.
  - **Tech Stack: Python, Scikit-learn, ReactJS, NodeJS, Solidity, MetaMask, Express, Tailwind**
- **Zen Zone — Live — Github** *Sept 2024*
  - Developed a full-stack mood-tracking web app with community support using the MERN stack, implementing JWT authentication and context API for secure user access and role-based actions.
  - Integrated RESTful APIs for CRUD operations on blogs and mood entries, enabling users to view, update, and track mood history with an intuitive UI
  - **Tech Stack: MongoDB, React, Express, Node, Javascript, Recharts, Aceternity, Tailwind**
- **English to Spanish Translator— Colab** *May 2024*
  - Engineered a machine learning model based on Transformer architecture to translate English text to Spanish, trained on a dataset of 5000 sentences.
  - Implemented transformer model using **Tensorflow** tailored to translate a sentence character-by-character.
  - Achieved a BLEU score of 0.62, highlighting the model's translation accuracy.
  - **Tech Stack: Python, Tensorflow**

Technical Skills

Languages: C/C++, Python, Javascript

Frameworks & Tools: ReactJS, MongoDb, SQL, HTML, CSS, Tensorflow

Core Subjects: Object Oriented Programming, DBMS, Operating Systems, Software Engineering, Algorithms

Data Structure & Algorithms: Solved more than 150 questions on Leetcode. — Profile

Version Control: Git, Github

Soft Skills: Leadership, Team work

Achievements

- **Research Paper**: Presented a paper titled "A Secure Searchable Encryption Scheme Over the Cloud" under the track "Multidisciplinary Aspects of Cyber Security" at the 7th International Conference on Innovative Computing and Communication, SBSC, New Delhi.
- **Desh Ke Mentor**: Shortlisted for a hands-on workshop conducted by Western Digital.
- **Google Cloud Career Practitioner Program**: Gained hands-on experience with Google Cloud components, including Kubernetes and containers.