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: 7.96
- **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, Secure Communication, Performance Analysis, GPU systems**

Projects

- **Fin Yojak — Live — Github** *Aug 2024*
  - Developed a responsive finance-tracker website with a user-friendly interface using **React**. Users can add, delete, edit and analyse their expenses over different time frames.
  - Utilised **Node.js** with **Express** for backend services. Focused on delivering clean, modern design and enhancing user experience.
  - Employed best practices including component-based architecture, state management, and effective error handling, ensuring a smooth user experience and maintainable code.
  - **Tech Stack: MongoDB, ReactJS, Express, Node, Javascript, Bootstrap, Material UI**
- **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**
- **Carbon Prints —Github** *April 2024*
  - Developed a fully authenticated carbon footprint tracking platform that allows users to calculate and track their carbon emissions over time using analytics tools like pie charts.
  - Ranked among the top 12 projects at the IEEE IGDTUW Hackathon, out of over 400 participants.
  - **Tech Stack: MongoDB, ReactJS, Express, Node, Javascript, Recharts**

Technical Skills

Languages: C/C++, Python, Javascript

Frameworks & Tools: Nodejs, 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**: Conducted over 50 one-on-one mentoring sessions as part of the Desh Ke Mentor initiative, guiding students on career paths.
- **Anveshan Foundation Internship (Web Development)**: Among the top performers at Web Development cohort by Anveshan Foundation, IGDTUW. Developed interactive, responsive web pages using HTML, CSS, and JavaScript.