

# Nazia Hassan

Student

Bachelor of Technology

Indira Gandhi Delhi Technical University for Women, New Delhi

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GitHub Profile

LinkedIn Profile

## Education

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- **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

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- **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

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- **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**
- **Fin Yojak — Live — Github** Aug 2024
  - Developed a responsive finance-tracker website where users can add, delete, edit and analyse their expenses over different time frames.
  - Focused on delivering a modern design and enhancing user experience with a user-friendly interface using **React**.
  - **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**

## Technical Skills

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**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

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- **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, IGDТУW. Developed interactive, responsive web pages using HTML, CSS, and JavaScript.