Shoaib Mobassir

Indian Institute of Technology Delhi | **2021CH10409**
Chemical Engineering | **B. Tech.**
DOB: 20/01/2003 | **Gender: Male**
shoaibiitdelhi@gmail.com | **+91 8651414896**

Examination	University	Institute	Year	CPI/ %
Graduation	IIT Delhi	IIT Delhi	2025	7.6
Intermediate	CBSE	Nezamia Public School, Patna	2020	90.6 %
Matriculation	CBSE	Jean Paul's High School, Begusarai	2018	81.4 %

Scholastic Achievements

- **JEE Advanced 2021:** Secured **AIR 1192** (OB), ranked in the **top 1%** among 1.2 million+ students across India
- **JEE Mains 2021:** Secured **AIR 552** (OB), ranked in the **top 0.03%** among 1.2 million+ students across India
- **LPUNEST 2021:** Secured **AIR 79** (GEN) and ranked in the **top 0.01%** among 80,000+ students across India

INTERNSHIP

Ethica Invest, Remote *(March'23 - May'23)*
Data Science Intern

- Successfully implemented an advanced **Time2Vec Transformer model** for heightened stock price prediction accuracy.
- Implemented a tailored Transformer model with **Time Embeddings** for strategic improvement in stock prediction.
- Designed a **Parallel Genetic Algorithm** mathematical model, integrating Bollinger Bands for streamlined backtesting

Key Projects

Multilingual AI-Based Video Translation and Dubbing *(April'23-June'23)*
Self Project

- Developed an AI pipeline with **ffmpeg, pydub, and Whisper STT** for seamless translation and dubbing of **(Hinglish) videos into (Telugu),** preserving voice quality and emotional nuances
- Integrated **IndicTrans NMT** for accurate translation, synchronized and enriched multilingual content with **moviepy**

Medical Pill Identifier *(Dec'23)*
Self Project

- Developed a **medical pill identification model** in videos by integrating **YOLOv5** framework with **OpenCV**.
- Achieved **80%** accuracy and scalability in medical pill identification, enabling efficient healthcare inventory management.

AI Recommender *(Dec'22-Jan'23)*
Self Project

- Developed a **content-based** recommendation system, leveraging Machine Learning and Natural Language Processing
- Gathered data through web scraping using the **Beautiful Soup** library from the website https://theresanaiforthat.com
- Implemented **Bag of Words text vectorization** and used cosine distance for accurate similarity scores between AIs

Dynamic Python Interpreter with Memory Management *(Jan'22-March'22)*
Prof. Preeti Ranjan Panda | Course Project *IIT Delhi*

- Developed a memory-efficient **Python interpreter** with the ability to execute Python code with optimal performance
- Implemented functionality to **handle multiple levels of nested while loops**, and execute complex algorithms.

Stock Market Prediction using ML *(April'23-June'23)*
Self Project

- Applied the **Random Forest algorithm** to analyze the non-linear relationships of stock market data of SP500 index
- **Developed different predictors** to analyze the relationship between actual closing price and average closing price
- Across different time frames, **conducted rigorous backtesting** to evaluate predictor performance and validity

Throttle Operation Thermodynamics *(April'23-May'2)*
Prof. Gaurav Goel | Course Project *IIT Delhi*

- Implemented a **C++ code** utilizing **Linear Interpolation** to accurately evaluate intensive and extensive properties
- Applied **linear regression algorithms** to model the relationship between enthalpy and entropy values accurately

Technical Skills

Programming	Proficient in C++, Python | Familiar with JAVA, HTML, CSS, SQL, MATLAB
Exposure	Familiar with Numpy, Pandas, Matplotlib, Seaborn, SciPy, Scikit-Learn, Pytorch
Tools and Platforms	Git, Github, OpenAI, Power BI, Anaconda, AutoDesk Inventor, MS Office, Figma

Relevant Courses

Machine Learning	Supervised Machine Learning: Regression and Classification, Advanced learning algorithms
Deep Learning	Convolutional Neural Networks, Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization
Computer Science	Data Structures and Algorithms