

# Eshaan Trehan

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**LinkedIn:** <https://www.linkedin.com/in/eshaantrehan/> | **GitHub:** <https://github.com/EshaanTrehan>

**Portfolio Website:** <https://eshaantrehan.github.io/>

## EDUCATION

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**Trinity College Dublin** | Grade – 2.1

Dublin, Ireland

*Computer Engineering, Bachelor's in Engineering.*

Sep 2022 – May 2024

**Program Coursework:** Data Structures & Algorithms, Software Design Analysis, Deep Learning, Computer Architecture, Probability & Statistics, Data Visualisation & Analysis, Internet Applications

**Thapar Institute of Engineering & Technology**

Punjab, India

*Computer Engineering, Bachelor's in Technology*

May 2020 – Aug 2022

**Program Coursework:** Operating Systems, Computer Networks, Database Management System

## WORK EXPERIENCE

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**Bloomberg (Data Management Services) | Software Engineer, Intern** / Dublin, Ireland

May 2023 – Sep 2023

- Added health endpoints with advanced features for improved monitoring and incorporated time control features to boost efficiency. Rectified critical service bugs related to null errors, job retries, and time discrepancies, ensuring data integrity and system reliability.
- Automated file generation with FreeMarker templates, streamlining the transition from over 10 ‘.dp’ to JSON and dppfest files.
- Employed rigorous unit testing on over 15+ services, employed Antlr for file parsing, and resolved CSV duplicate entries to ensure data accuracy and code reliability. Leveraged Spring internal functions, including retry templates, for bug fixing increasing efficiency by 5%.
- Enhanced Kubernetes service connectivity by utilised JavaScript and optimised the UI achieving 85% seamless integration, managed deployment pipelines with Jenkins for over 50 deployments.

**Vantage Circle | Software Engineer, Intern** / India

Jul 2021 – Sep 2021

- Worked on hosting an internal expense management tool on GitHub and improving the integration between the backend and database for the tool.
- Ran internal queries on Postgres Database with Python's API for Postgres. Researched about Apache Calcite and where it would be suitable to be used for internal company requirements.

## PROJECT EXPERIENCE

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### Stock Predictor & News sentimental Analysis

- Developed a financial analysis tool in Python, integrating real-time stock prices (via yfinance and pandas\_datareader) and news articles for insights using NewsApi.
- Conducted sentiment analysis on stock-related news using TextBlob, NLTK, Flair, and transformers; visualised correlations on matplotlib and plotly. Built a Keras-based deep learning model / machine learning with LSTM for stock price prediction, achieving less than 5% error after 100+ iterations.
- Deployed a Streamlit web dashboard for real-time viewing, enhanced with error handling and integrity checks. Increased data cohesiveness by aligning dates between stock prices and news data, prioritising accuracy, and robustness.

### Decentralised Chat App

- Developed a decentralised P2P network on Pi platforms for resilient communication. Utilised UDP for lightweight, low-latency transmission and integrated SHA-256 for secure authentication.
- Implemented NAT hole-punching with a rendezvous server, allowing seamless peer communication. Gained proficiency in Python socket programming and applied OpenVPN for secure server access.

## CERTIFICATIONS

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- **Specialization by University of Michigan (2022)** – Python for Everybody including courses [[Python for Everybody](#), [Python Data Structures](#), [Using Python to access Web Data](#), [Using Databases with Python](#), [Capstone Project with honors](#)]
- **Course by University of Michigan (2022)** – Blockchain and Cryptocurrency Explained
- **Course by Indian School of Business (2022)** – Trading Algorithms
- **Course by University of California San Diego (2022)** – Algorithmic Toolbox

## SKILLS

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- **Proficient:** Python, C/C++, Java, Spring Boot, Bitbucket, Jira, Jenkins, ChatGPT, VS code, Swagger, Ansible
- **Familiar:** HTML5, CSS, Free marker, Antlr, JavaScript, Junit, Calcite, SQL, Git, GitHub, Python (Keras, NumPy, Pandas, Streamlit, Sklearn, yfinance, TextBlob, NLTK, Flair, LSTM, Matplotlib, Plotly), MATLAB, Jupyter, Linux, MongoDB, Gradle, Apache Maven, Confluence