# NAMAN SINGHAL

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https://the-neemon.github.io/

## SUMMARY

Dual Degree student at IIIT Hyderabad bridging Computer Science with Computational Linguistics. Passionate about exploring the intersection of linguistics and machine learning to build intelligent NLP systems, interested in exploring novel research applications in areas like sentiment analysis and multimodal search

## SKILLS

**Languages**

C/C++, Python, SQL, JavaScript, HTML, CSS

**Libraries & Frameworks:**

NLTK, Pandas, NumPy, SciPy, Streamlit, Matplotlib/Seaborn, Vector Databases

## EDUCATION

### Master of Science in Computational Linguistics

**IIIT Hyderabad**

01/2024 - 05/2029 Hyderabad, India

### Bachelor of Engineering in Computer Science

**IIIT Hyderabad**

07/2024 - 05/2029 Hyderabad, India

## PROJECTS

### Sentiment Analysis on Social Media Texts with Semantic Interpretation

Conducted a comparative study evaluating the efficacy of traditional machine learning versus semantic-enhanced approaches for social media sentiment classification. Engineered a robust feature extraction pipeline combining syntactic analysis with semantic embeddings and contextual rules, validating the model on a 1.6-million-tweet corpus and a domain-specific airline dataset.

### CLIP-Powered Design Search

Built a semantic image search engine for Google Drive design repositories by leveraging OpenAI's CLIP model to generate multimodal embeddings. This eliminates the need for manual metadata tagging, enabling natural language retrieval with high accuracy. The architecture integrates a vector database for efficient high-dimensional indexing and features a GPU-accelerated processing pipeline to ensure scalable, low-latency performance via a custom web interface.

### Systematic Strategy Backtester

Built a systematic trading simulation platform for commodity markets capable of executing averaging-down logic with customizable entry gaps and profit targets. The application has a robust backtesting engine that handles gap-down protection and forced expiry exits, allowing stress-testing of strategies over continuous historical data with comprehensive visual analytics including equity curve tracking and cycle-based PnL to facilitate in-depth strategy auditing and optimization.

## KEY ACHIEVEMENTS

**Class 10 Boards**

Received 97.8% in Class 10 Boards

**Class 12 Boards**

Received 95.8% in Class 12 Boards

**JEE**

Ranked within the top 1 percentile of all students in India

**UGEE**

Got a rank of 118 among more than 1 lakh students