

# MELVIN THOOMPUNKAL

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## PROFESSIONAL SUMMARY

<https://github.com/melvinthoompunkal>

Motivated Computer Science undergraduate entering sophomore year with hands-on experience in web development, blockchain applications, and Java socket programming. Skilled in Python, Flask, Java, and front-end technologies with a strong foundation in data analysis and machine learning (Pandas, scikit-learn). Recognized for problem-solving, collaboration, and fast learning, with a proven ability to design and implement scalable, user-focused applications.

## EDUCATION

*New Jersey Institute of Technology*

Expected May 2028

B.S. in Computer Science

Dean's List (2025)

Relevant Coursework: Introduction to Java, Calculus II

## EXPERIENCE

*Freelance Web Developer | Remote – NJ*

Sep 2023 – May 2024

- Designed and deployed websites using HTML, CSS, JavaScript, Python, and Flask, improving responsiveness and user experience.
- Developed custom web applications, tailoring solutions for diverse client requirements.
- Implemented SEO best practices to optimize website visibility and performance.

## PROJECTS

*Blockchain Credit Score System | Python, Blockchain, Data Structures*

- Built a decentralized blockchain network to calculate credit scores using alternative data sources (e.g., phone bills).
- Designed secure custom data structures for transaction validation and block creation.
- Demonstrated blockchain's potential in fintech applications beyond traditional credit systems.

*Java Socket-Based Chat Application | Java, Sockets, Swing, Multithreading*

- Built a client-server chat system using Java sockets with real-time message handling.
- Designed a GUI with Swing for both server management (start/stop, connection monitoring) and client messaging.
- Implemented multithreading to support simultaneous connections and smooth communication.

*Stock Market Analysis Tool | Python, Pandas, yFinance, Google Sheets API, Matplotlib*

- Built a financial analytics program that retrieves real-time market data using yFinance and computes key technical indicators (SMA, EMA, RSI, MACD, Bollinger Bands, VWAP, OBV, Stochastic Oscillator).
- Automated data storage and visualization by integrating with Google Sheets API for dynamic reporting.
- Designed plotting functions with Matplotlib to display trendlines, moving averages, and momentum indicators.
- Implemented modular functions for flexibility in analyzing different stocks, time ranges, and strategies.

## TECHNICAL SKILLS

- Languages & Frameworks: Python, Java, Flask, HTML, CSS, JavaScript
- Web Development: Responsive Design, API Integration, SEO Best Practices
- Blockchain & Systems: Decentralized Application Design, Data Structures, Transaction Validation
- Programming Concepts: Multithreading, Asynchronous Programming, Socket Programming

## LANGUAGES

- English (Fluent)
- Malayalam (Fluent)