

# Jayvardhan Singh

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## Education

**New York University** – MS in Computer Engineering | GPA: 3.67 / 4 May 2024

*Relevant Coursework: Big Data, Machine Learning, Deep Learning, Real-Time Embedded Systems, Internet Architecture and Protocols, Principles of Database Systems, Computing Systems Architecture*

**Manipal University Jaipur** – B.Tech. in Computer Engineering | GPA: 8.02 / 10 Jun 2022

*Relevant Coursework: Object Oriented Programming with Java, Web Technologies, Computer Networks, Cloud Computing, Software Testing, Unix Shell Programming, Operating Systems*

## Skills

**Programming Languages:** Python, JavaScript, TypeScript, Go, SQL, Bash, HTML/CSS

**Frameworks & Libraries:** React, Vue.js, Express, Node.js, Flask, FastAPI, GraphQL

**Technologies & Tools:** Git, Linux, MongoDB, PostgreSQL, Redis, Docker, Jenkins, GitHub Actions

## Experience

**Software Engineer**, Model.Earth – Atlanta, USA Aug 2024 – Present

- Increased user engagement with international trade data by 15% by implementing interactive Exiobase chart visualizations using TypeScript and D3.js, enhancing data exploration and analysis capabilities.
- Reduced data processing time by 70% for multiple countries' trade inflow data by innovating a Python script to automate CSV file generation from raw Exiobase data.
- Refactored API-dependent pages to utilize local JSON files, employing JavaScript and Rollup.js, resulting in a 40% reduction in page load times and improved offline functionality.

**Software Engineer Intern**, HPCL-Mittal Energy Ltd. – Bathinda, India Jul 2023 – Aug 2023

- Architected a Java microservices-based inventory management system, boosting refinery equipment tracking accuracy by 30% and minimizing manual data entry errors.
- Reduced average deployment time by 30% for the Java-based inventory management system by contributing to CI/CD pipeline improvements using Jenkins and GitHub Actions.
- Optimized database queries for the equipment maintenance system, enabling 500+ concurrent users to process requests for 10,000+ components, resulting in a 40% performance boost.

**Software Engineer Intern**, Karvi E&C – Vadodara, India Jan 2022 – May 2022

- Developed a responsive React-based frontend for Karvi's ACEs education portal prototype, reducing estimated new mentee onboarding time by 50% through an intuitive user interface and streamlined information architecture.
- Implemented a Node.js and Express backend with MongoDB integration for the ACEs portal, improving data retrieval speed for key operations through basic query optimization techniques.
- Increased test coverage to 70% by writing and executing unit tests using Jest, contributing to a more stable and maintainable codebase for the ACEs education portal prototype.

## Projects

**SpendSmart - AI-Powered Expense Management System** [github.com/spend-smart](https://github.com/spend-smart)

- Crafted a full-stack application with React, Flask, and SQLite, incorporating JWT authentication and role-based access control, resulting in a 40% reduction in expense processing time for 50 simulated concurrent users.
- Devised a predictive model using scikit-learn that achieved 85% accuracy on test data, streamlining expense approval decision-making by 30%.
- Integrated real-time notifications and analytics using Slack API and data visualization libraries, boosting budget adherence by 25% through actionable insights on interactive dashboards.

**CryptoTrade Simulator - Algorithmic Trading Strategy Backtester** [github.com/crypto-bot](https://github.com/crypto-bot)

- Designed a cryptocurrency trading bot simulator leveraging Python, FastAPI, and CCXT, enabling comprehensive backtesting of multiple trading strategies on Coinbase historical data.
- Formulated and implemented two trading strategies (Simple Moving Average and Relative Strength Index), creating a flexible framework for seamless strategy expansion.
- Achieved a 30% improvement in backtesting performance through strategic data caching and parallel processing of multiple trading scenarios.