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, Java, JavaScript, C#, Go, SQL, Bash, HTML/CSS
Frameworks & Libraries: React, Express, Node.js, Flask, FastAPI, .NET, Spring Boot
Technologies & Tools: Git, Linux, MongoDB, PostgreSQL, Kafka, Spark, Docker, Jenkins, GitHub Actions

Experience

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.
- Orchestrated CI/CD pipelines using Jenkins and GitHub Actions, integrating Kubernetes deployments and Helm charts, accelerating software delivery cycle by 70% from weekly to daily releases.
- 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

- Spearheaded the development of an intuitive React-based frontend for the ACEs education portal, slashing new mentee onboarding time by 75% from 2 days to 4 hours.
- Constructed a scalable full-stack infrastructure using Node.js, Express, and MongoDB, enhancing API response times by 40% for key operations through query optimization and indexing.
- Drove a 20% increase in user satisfaction scores by collaborating on A/B testing and achieving 80% code coverage through comprehensive unit testing with Jest.

Projects

SpendSmart - AI-Powered Expense Management System 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

- 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.

Real-Time Stock Market Data Processing Pipeline github.com/stock-pipeline

- Engineered a high-performance ETL pipeline using Python, Kafka, and Spark, reducing Finnhub.io data ingestion latency by 20% while processing over 350,000 data points hourly.
- Developed and deployed a predictive machine learning GBM model using Scala, elevating stock price trend prediction accuracy by 15%.