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FULL STACK SOFTWARE APPLICATIONS:

Stock Market Trading Simulator: Sol

Link- <https://capstone-ybmg.onrender.com/>

Description: A real-time trading simulation platform with automated stock data updates, seamless market interactions, and scalable financial data processing.

- **Real-Time 15min Delay Data Processing & Automation:** Implemented an APScheduler-integrated backend that automatically fetches and updates live stock market data from the source, which is delayed by 15 minutes.
- **Scalable Microservices & API-Driven Architecture:** Built a Flask-based backend with SQLAlchemy ORM, enabling high-performance API interactions with external financial data sources (e.g., Polygon.io).
- **Efficient State Management & Frontend Performance Optimization:** Designed a React-powered UI with Redux state management and asynchronous data handling, ensuring seamless stock data updates without performance degradation.
- **Cloud Deployment & Infrastructure Reliability:** Successfully deployed the application on Render, showcasing DevOps capabilities in cloud infrastructure management, automated provisioning, and scalable service deployment.
- **Robust Data Handling & System Resilience:** Engineered an optimized database schema and integrated efficient data-fetching mechanisms to handle millions of stock transactions efficiently, ensuring data integrity, consistency, and fast query execution.

Music Streaming App: Melody

Link - <https://melody-63tg.onrender.com/>

Description: A cloud-integrated music platform with custom audio playback, real-time browsing, and optimized media streaming for a smooth user experience.

- **Scalable State Management & Frontend Performance Optimization:** Built an interactive React frontend using Hooks and Redux, ensuring a real-time, dynamic music browsing experience with seamless state transitions and reduced re-rendering overhead.
- **Custom Audio Streaming & Cloud Integration:** Engineered a WaveSurfer.js-based custom music player for on-demand audio playback, efficiently streaming music files from AWS S3.
- **Efficient Backend API & Database Design:** Developed a Flask-based backend with SQLAlchemy ORM, enabling scalable API endpoints and optimized database queries for fast, reliable music retrieval and playback.
- **Cloud-Native & Scalable Deployment:** Utilized AWS services for secure and efficient file storage, ensuring high availability and scalability while deploying the application on Render with Docker and Gunicorn.
- **Optimized System Performance & User Experience:** Fine-tuned state management and API interactions to minimize lag and enhance responsiveness, ensuring a highly performant and user-friendly music streaming experience.

TECHNICAL & FINANCIAL SKILLS

Programming Languages:

JavaScript, Python, HTML, CSS, SQL, CAD/CAM

Frameworks & Libraries:

React, Redux, Express, Node.js, Flask

Database & Infrastructure:

Postgres, SQLAlchemy, Sequelize, Data Pipelines, ETL Processing

Cloud & DevOps:

AWS (S3, Lambda, EC2), Docker, CI/CD

Financial Data Processing & Analysis:

Market Analysis, Automated Trading, Risk Management, Data Analysis

Software Development & Workflow Optimization:

Scrum, Agile, Pair Programming, Support Blog, Magic Touch, Media

RELEVANT PROFESSIONAL EXPERIENCE

Microdental Laboratories (*Leading provider of high-precision dental prosthetics and digital workflow solutions*)

Production Operations Lead

March 2023 – August 2024

- Developed and managed budget proposals for onsite machines, successfully rerouting expedited orders from Livermore, CA and Shenzhen, China to New York, cutting lead times and costs.
- Implemented enterprise-wide automation, including a real-time scanning system, reducing case remakes from 18% to 4% in 8 months and ensuring seamless tracking.
- Oversaw procurement and resource allocation, maintaining inventory, negotiating with vendors, and managing a weekly lab budget to optimize resource usage.
- Trained and mentored staff, introducing state-of-the-art dental fabrication techniques and improving precision in restoration designs and digital workflows.
- Directed daily scrum meetings, prioritized high-value cases, and managed critical escalations, ensuring on-time international shipments and streamlined operations.
- Resolved high-impact production errors, reallocating resources and overseeing 8-hour rebuilds for precision dental restorations, maintaining strict quality standards and reputation.

Eshha Jewelers (*Family-owned business specializing in traditional South Asian gold jewelry*)

Account Manager

January 2019 – May 2023

- Managed \$300K+ in gold trading transactions with top U.S. refineries, including American Gold & Diamonds, Refine Max, and Ross Precious Metals, ensuring financial accuracy, regulatory compliance, and optimal profit margins.
- Maintained precise financial tracking and reconciliation systems for transactions, invoicing, and payment processing using Microsoft Excel.
- Conducted real-time market and economic analysis, leveraging pricing trends and historical data to strategically time gold buying and selling decisions, minimizing risk in volatile markets.
- Oversaw in-store and international sales operations, coordinating custom orders from Dubai, Oman, and India while ensuring logistics, U.S. customs documentation, and tax compliance for seamless transactions.
- Developed high-value client relationships, applying consultative sales strategies and financial advisory insights to enhance customer engagement, retention, and revenue growth.
- Implemented accurate financial tracking systems for invoicing, payment processing, and inventory valuation, improving cash flow and overall business profitability.

EDUCATION & CERTIFICATIONS

App Academy

Binghamton University Coursework

New York City College of Technology

Full Stack Software Engineer Certification

Studies in Economic Studies

Restorative Dentistry Program