Harshavardhana Mudduluru

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Objective

Motivated and adaptable Computer Science graduate seeking entry-level opportunities as a Java Full Stack Developer or Data Analyst. With a strong foundation in software development, analytical tools, and cross-functional collaboration, I bring hands-on experience from multiple internship projects. Equally comfortable in building responsive web applications or interpreting data to drive insights, I am ready to contribute to development teams or data-driven environments.

Summary

- Developed Lean Canvas Model and facilitated business requirement gathering to guide product strategy.
- Automated Excel reports at PA Supermarché to deliver weekly insights, improving efficiency by 40%.
- Forecasted demand trends and optimized stock rotation through sales analysis supporting targeted promotions.
- Collaborated with a team to build a drone-based human detection system using 3DCNN and SSD models.
- Implemented MSE similarity checks to eliminate redundant data to ensure precision in rescue detection.

Education

Concordia University — **Montreal, QC, Canada**
Masters of Applied Computer Science — September 2022 – August 2024

Rajalakshmi Engineering College — **Chennai, India**
Bachelor of Computer Science and Engineering — August 2018 – June 2022

Skills

Technical Skills: Java, Python, JavaScript, TypeScript, C/C++, React.js, Spring Boot, HTML5, CSS3, Bootstrap, Material UI, Maven, Gradle, Node.js, Express.js, GitHub Actions, MySQL, PostgreSQL, Docker, Kubernetes, Apache Tomcat, Power BI, Excel (Advance), Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow, Keras, PyTorch, OpenCV, Postman, JUnit, JMeter, Selenium, Jira, Lucid, Microsoft 365, SharePoint Online

Professional Skills: Agile Methodology, Team Collaboration, Analytical Thinking, Communication, Prioritization, Problem Solving, Time Management, Adaptability, Documentation, Research Skills, Knowledge-Transfer, Cross-Functional, Commited, Flexible, statistical

Experience

Business Analyst (Internship - Independent Contractor) - Remote — **January 2025 – Present**
Vosyn — **Toronto, Ontario**

- Developed Lean Canvas Model for VosynCore after market analysis and benchmarking.
- Led cross-functional pods, translating stakeholder discussions into actionable requirements.
- Facilitated cross-team and stakeholder meetings to align product functionalities with business goals.
- Identified monetization opportunities with tiered subscriptions and API-based services.
- Working on prompt engineering to create a custom model to help the internal teams in the organisation.

Data Analyst (Part-Time) **September 2022 – August 2023**
PA Supermarche **Montreal, Quebec**

- Analyzed weekly sales data using Pivot Tables to identify high-demand products.
- Automated Excel reports to track key performance metrics, improving reporting turnaround time by 40%.
- Used data-driven strategies to uncover customer purchase patterns and support targeted promotions.
- Assisted in demand forecasting to improve inventory management and reduce overstock.
- Supported marketing efforts by analyzing customer purchase behavior to tailor promotional strategies.

AI Engineer (Internship) **December 2019 – July 2020**
Bennett University **Greater Noida, India**

- Collaborated with a team to develop a drone-based search and rescue system using 3DCNN and SSD networks.
- Coded the system to detect waving individuals, extract GPS coordinates, and send data to a central database.
- Utilized SSD for rapid and precise human detection, enhancing responsiveness in emergency situations.
- Applied Mean Squared Error (MSE) for similarity checks to reduce redundant data and improve overall accuracy.

Projects

Bug Logger – ReactJS, Context API

- Developed bug tracking system using React.js to manage and track software issues efficiently.
- Utilized (useReducer) for centralized state management, enabling structured handling of bug creation, updates, and status changes.
- Integrated Context API to facilitate global state sharing across components, improving scalability & maintainability.
- Designed dynamic UI using CSS Flexbox & Grid, optimizing responsiveness & accessibility.
- Leveraged event-driven programming to enable real-time updates when users log, edit, prioritize, & mark bugs as resolved.

HarshaFlix – ReactJS, React Router, JSON

- Developed dynamic movie browsing application using React.js to create interactive & responsive UI.
- Implemented React Router for seamless navigation between pages, enhancing user experience.
- Designed state management system using React Hooks to efficiently handle search, filtering, rating & watchlist management.
- Utilized JSON as data source for static movie listings & integrated event-driven programming to enable real-time UI updates.

Graph Algorithm Comparison – Java

- Conducted comparative analysis of augmenting route algorithms, including Shortest Augmenting Path, DFS-like, Maximum Capacity and Random Path, to optimize maximum flow in graph networks.
- Effectively reduced iterations and computational complexity. Evaluated in terms of efficiency.
- Implemented Ford-Fulkerson as foundational algorithm, achieving a 7% efficiency improvement with SAP and 5% efficiency with DFS-like algorithm in sparse networks.

OpenTracks Concordia Enhancement – Java, Android, Maven

- Improved open-source real-time application by adding weather-display & fixing bugs to enhance user experience.
- Integrated Weather APIs to fetch & incorporate external weather data, providing real-time updates in app.

Flight Data Analysis using MPI and Docker – Python, MPI, Docker

- Developed Python scripts to analyze data, utilizing Message Passing Interface (MPI) enabling efficient data distribution.

- Created a Docker environment with multiple containers & analyzed efficiency of script with different numbers of containers.
- Implemented Distributed System Design concepts like parallelism, fault tolerance, scalability.

Real-Time Driver Drowsiness Detection System – Python, NumPy, OpenCV, Keras, DL

- Developed alert system to detect & monitor driver drowsiness, reducing response time to fatigue within 2 seconds & addressing major traffic accident causes by providing real-time alerts & enhancing road safety.
- Employed OpenCV for real-time eye movement analysis, enabling precise detection of driver eye states.
- Used Keras to build & train deep learning models (VGGNet, ResNet), achieving 93% accuracy in drowsiness detection.

Certifications

- **Deep Learning for Computer Vision –** NVIDIA Deep Learning Institute
- **Preparing for Analysis with Microsoft Excel –** Microsoft
- **React 18 Course 2025 -** Udemy