

JAISHREE BALAMURUGAN

(669) 215-9419 | ✉ jaishreebala1102@gmail.com | 🌐 www.jaishreebala.com | 📍 jaishreebala | in Jaishree Balamurugan

EXPERIENCE

Data Engineer Intern | *Tesla*

Sept 2023 - Present

- Spearheaded project to create KPI dashboard for wall connectors, tracking crucial metrics like firmware-related failure rates
- Designed visualizations on **Tableau** by creating data sources using **Spark** & scheduling daily updates with **Airflow DAGs**
- **Conducted user interviews** to determine KPIs, created project timeline, epics & tickets to drive project development

Data Scientist Intern | *Intact Financial Corporation*

Jan 2023 – Apr 2023

- Trained and fine-tuned **sentence transformers with few-shot learning** to classify medical documents and achieve over 90% accuracy and recall across 28 categories
- Improved performance of rule-based algorithms by refactoring the code to improve efficiency and **reduce runtime by 94%**
- Developed and integrated trained models with **ML Flow** to enable easy tracking and comparison of model performance

Machine Learning Developer | *Daisy Intelligence*

Jan 2022 – Apr 2022

- Trained a **Text Classification NLP model** using scikit-learn, Pandas, and NumPy to categorize grocery products, achieving an accuracy of over 95% across multiple datasets
- Optimized model by using NLP methods such as **TF-IDF, tokenization, lemmatization & stemming** combined with KNN
- Developed an ML pipeline to automate the process of cleaning, training, and classifying predictions for 1000+ products

Data Scientist Intern | *Wish*

May 2021 – Aug 2021

- Led a high-impact project to **improve product recommendations** and presented key results to stakeholders using Tableau
- Trained a regression model using an **ensemble of random forest and support vector regression** to predict inventory turnover, increasing product adoption rate by 20% and helping over 1 million merchants
- Created efficient **SQL** queries on Presto/Hive to **extract over 10M rows of data** stored across 8+ tables for model training

Software Developer Intern | *Front Rush*

Sept 2020 – Dec 2020

- Led project to redesign a sport inventory tracking system by building **10+ web pages** & implementing **15+ custom features**
- Delivered data-driven insights through the development of an inventory dashboard, **increasing user satisfaction by 30%**

PROJECTS & LEADERSHIP

Soulscribe AI, *Python, AWS Lambda, Swift*

- Worked with a cross-functional team to develop an AI-assisted journaling mobile app that helps users process their emotions
- **Trained & fine-tuned LLMs** like Llama and Dolly to simulate a therapy session by following therapy methods like CBT

Reinforcement Learning, *Python*

- Trained & tuned hyperparameters of advanced RL algorithms (**TRPO, SAC, A2C**) on continuous and discrete environments
- Coded **RL algorithms from scratch** (SARSA, Q Learning, & double Q Learning) and trained an agent to solve a maze

Product Manager @ *UW Blueprint*

- Led an interdisciplinary team of 8 designers & developers to create a recruitment tool, and boosted team productivity by 66% through the optimization of agile processes, including sprint refinement, stand-ups, and workflow optimization

EDUCATION

University of Waterloo

Sept 2019 – Apr 2024

Candidate for Bachelor of Applied Science, Computer Engineering | **91.80% CGPA**

Relevant Courses: Data Structures & Algorithms, Concurrency, Databases, Reinforcement Learning, Software Architecture

Honors: First in Class (1 term), Dean's Honors List (6 terms), President's Scholarship of Distinction

SKILLS

Programming Languages

Python, SQL, C/C++, JavaScript, C#, HTML/CSS, Kotlin

Machine Learning & Data Science

NumPy, Pandas, Scikit Learn, Matplotlib, Jupyter Notebook, Tensorflow, Pytorch

Technologies & Frameworks

Git, NLP, Tableau, Airflow, Spark, LLMs, OpenCV, Hadoop, Hive/Presto, JIRA