RUCHIT DOBARIYA

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EDUCATION

Concordia University, Montreal (September 2022 - Present)
Master of Applied Computer Science

Gujarat Technological University (July 2018 - May 2022)
Bachelor of Computer Science

SKILLS

Programming: Python, Java, C/C++, Javascript, Typescript, Golang
FrameWorks / Operating Systems: Flask, FastApi, Django, TensorFlow, PyTorch, Linux
Database Management: InfluxDb, SQL(MySQL), NoSQL, MongoDB
DevOps: Docker, Kubernetes, Kubeflow, Google Cloud Platform, Camunda
Other Tools: Git, Postman

EXPERIENCE

Ericsson (September 2023 - Present)
Machine Learning Intern *Montreal, Canada*

- Implementing **Multi-Agent Framework** in **Python** and **Java**, as well as engineering Data Parsers and Database Schema to **optimize** 5G network efficiency and reduce Query response time.
- Integrating **Camunda** workflows to streamline processes and reduce operational bottlenecks.
- **Researching** and actively contributing to the implementation of **ML algorithms**, resulting in an **improvement** in predictive analytics accuracy and contributing to a enhancement in overall network performance.
- **Participating** in daily stand-ups to provide updates on project progress, discuss challenges, and collaborate with senior developers. Actively contributing to design processes by gathering requirements and collaborating with the development team.

Orena Solutions (January 2022 - April 2022)
Machine Learning Intern *Vadodara, India*

- **Developed** a **CNN model** utilizing **Transfer Learning** and **Data Augmentation Techniques**, achieving **92.54% accuracy** in **Brain Tumor Classification**.
- **Optimized hyperparameters** and **evaluated model performance**, leading to improved accuracy and **robustness**.
- Engineered end-to-end automated machine learning workflows utilizing **Git version control**, resulting in a **40% reduction in development time** and a **20% improvement in code quality**.

PROJECTS

Kubeflow-GNN - Python, PyTorch, Kubeflow (github)

- **Utilized SAGEConv** to perform **link property prediction** in **documents citation network data (ogbl-citation2)**, achieving an accuracy of **87.6%**.
- **Deployed GNN model Training** as **PytorchJob in Kubeflow**, which implements Pytorch training operator, resulting in a **20% reduction in training time**.
- **Implemented DDP (DistributedDataParallel)** for **Distributed Training** of the model, measuring accuracy and training time with **different epochs** (e.g., 50) and **number of workers** (e.g., 4), and observed a **12% increase in accuracy** with 4 workers.

Analysis of First Fit and CBIP Algorithms on Online Graph Coloring (github)

- Designed and developed a **React Application** to analyze and compare the performance of **algorithms** for **Online Graph Colouring**.
- Executed **algorithms** in **JavaScript** to colour the nodes of an **online graph** as they arrive in **real-time**.
- Conducted **experiments** to evaluate the efficiency of **algorithms** on different types of graphs, including **random, Erdős-Rényi, and scale-free graphs**.

Blog Web App - Python, Flask (github)

- Utilized **Flask** framework to build the backend of the application, ensuring a lightweight and modular structure.
- Employed HTML, CSS, and Jinja2 templating for creating a responsive and visually appealing user interface.
- Integrated a relational database **PostgreSQL** for efficient data storage and retrieval.

BuyEase - Javascript, Node.js, React.js, WebSocket, MongoDB (github)

- Developed BuyEase, a user-friendly web application using **Node.js, Express, and JavaScript** for scalable server-side architecture, integrating **MongoDB** for efficient data management.
- Enhanced user interactions by employing **React.js** in the front-end, leading to a **25% improvement** in overall satisfaction and engagement.
- Implemented real-time updates through **WebSocket technology**, providing instant notifications on product availability, promotions, and order status changes for a seamless online shopping experience.

Online Book Store - Java, Bootstrap, Javascript, Mysql (github)

- Built a dynamic online bookstore with HTML, CSS, **JavaScript**, and **Bootstrap** on the front-end, and **Java**, Servlets on the back-end, ensuring a seamless user experience from browsing to checkout.
- Utilized **MySQL** for robust data storage and retrieval, facilitating comprehensive administrative control. Implemented features like adding/removing books, quantity adjustments, and price updates.