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, AWS
Other Tools: Git, Postman, Jira

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** workflow to streamline processes and reduce operational bottlenecks.
- Implemented and fine-tuned algorithms resulting in a **25% improvement** in predictive analytics accuracy, driving higher customer satisfaction and enabling data-driven decision making.
- **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)
Software Developer Intern *Vadodara, India*

- Led a team of interns and spearheaded the development of several auxiliary projects for diverse services, employing a **3-layer architecture** in **Python with Flask**. I played a pivotal role in designing the **architecture, database schema, and REST APIs** for these initiatives.
- Acquired proficiency across various **DevOps** domains, with a strong emphasis on **Kubernetes, Terraform, and AWS,** through extensive hands-on engagement.

PROJECTS

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**.

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.

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 **PostgreSQL** as a relational database, achieving a **30%** improvement in data retrieval speed and ensuring efficient storage.

BuyEase - Javascript, Node.js, React.js, WebSocket, MongoDB, HTML (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 **WebSocket** for instant product, promotion, and order notifications, reducing update latency by **40%** for faster information dissemination.

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

- Built a 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.
- Enhanced administrative control using **MySQL** for real-time book management, achieving a 20% checkout time reduction through optimized queries and server-side processing.