NEIL CHITRE

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EDUCATION

M.S. in Data Science, University of San Francisco **July 2022 - June 2023**

Relevant Coursework: Advanced Machine Learning, Python Programming, Distributed Computing using Spark, Data Structures & Algorithms, Relational Databases (SQL), NoSQL, Data Acquisition, MLOps, A/B Testing.

B.Tech in Computer Science, Manipal Institute of Technology **July 2014 - June 2018**

Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Object Oriented Programming, Operating Systems.

PROFESSIONAL EXPERIENCE

Boost Sport AI **Nov 2022 - Present**

Data Science Intern

- Developed a sport agnostic **game prediction** model using the ELO Ratings Algorithm which forecasted outcomes for multiple sports leagues including EPL, NBA and NFL with an accuracy of **73%**.
- Developed automated **Natural language generation** systems in Python to produce real-time previews and recaps for sporting leagues such as the English Premier League and NCAA Big Ten Conference.
- Implemented standard sport-agnostic functionality in **Python (SQLAlchemy ORM)** to query and compile data from SQL databases into JSON.

Philips Healthcare **July 2018 - May 2022**

Software Engineer II

- Implemented a software solution called ROCC using ReactJS, Java and Python which enables radiologists to remotely perform multiple MRI and CT scans simultaneously, thus reducing patient wait time by **14%**.
- Developed a high-performance backend **Python** application using **Flask** and **RabbitMQ**, enabling seamless onboarding of new customers to the ROCC platform.
- Designed a highly efficient and scalable database schema on **PostgreSQL** for ROCC.
- Wrote fast and efficient queries using **GraphQL** API, reducing the application load time by **20%** and patient connect time from 8 seconds to 3 seconds.
- Designed and implemented secure APIs using **Java Spring**, connecting the ROCC User Interface with the backend infrastructure and enhancing the user experience for customers.
- Collaborated closely with stakeholders, including radiologists and technologists, to gather and analyze business requirements and translate them into scalable features for ROCC.

Software Engineer I

- Implemented the critical video calling feature for ROCC using **ReactJS** and Twilio API, enabling real-time communication between Senior Radiologists and rookie Technologists.

Wai Technologies **May 2017 - August 2017**

Data Science Intern

- Collaborated with the development team to build a **Recommender System** for educational modules, utilizing **Matrix Factorization** to predict ratings for each User and Item, enabling customers to discover relevant and engaging content.

ACADEMIC PROJECTS

E-Commerce Product Search (Github Repo)

- Implemented an efficient and scalable product search architecture that can handle large scale data and provide accurate results to users.
- Utilized **Airflow** to build a streamlined ETL pipeline that automatically fetches data from ASOS API, pre-processes it, and stores it in a **MongoDB** database. Used TF-IDF in **SparkML** to create rich word embeddings and calculated cosine similarity scores to get similar products.

Search Engine Implementation using Hashtables

- Implemented a searching mechanism using Hashtables to efficiently search through a large corpus of **4500** news articles.
- Conducted benchmark tests to compare the results of a Linear Search vs Hashtable search and analyzed the results. Reduced the search time from **5 seconds to 0.02 milliseconds** by using Hashtables.

SKILLS

- Programming Languages and Databases: Python, SQL, Java, ReactJS, Shell Script, NoSQL (MongoDB).
- Technologies/Frameworks: Spark, Spark MLLib, Airflow, MongoDB, Hadoop, Kafka, Flask, Java Spring, AWS S3, GraphQL, RabbitMQ, Git, PyTorch, Google Cloud Platform (GCP).
- Machine Learning: Linear Regression, Decision Trees, Random Forest, Boosting, Recommender Systems.