YUKTHI WICKRAMARACHCHI

yukthi.wickramarachchi@gmail.com I yukthiwick.com I https://ca.linkedin.com/in/yukthi-wick I +1 437-256-9875

LANGUAGES AND TECHNOLOGIES

Languages: Python, C, Java, Javascript, Typescript, Bash, HTML
Technologies: Git, PostgreSQL, React, Jupyter Notebook

EXPERIENCE

Full-stack Software Engineer (Internship), Deep Genomics, Toronto, Ontario   **May 2023 - December 2023**
- Developed Python package for computational gene therapy design
    - Implemented and productionized three novel workflows in conjunction with machine learning scientists
    - Tested and validated workflows using Pytest framework
- Implemented backend for new drug design implementation in Python
    - Responsible for implementation of REST API layer as well as the Use Case Layer for new entities
    - Utilised FastAPI framework for REST layer development
- Collaborated with a diverse team of machine learning scientists and biologists on transformer model for gene expression prediction
    - Fine tuned model for cell health classification, achieved 95% held-out accuracy on heart cell dataset
- Developed web app for wet-lab scientist data collection and experiment design
    - Used React-Ts framework with Redux toolkit for state-management
    - Refactored Javascript components to Typescript

Research Assistant, The Hospital for Sick Children - Paterson Lab, Toronto, Ontario   **August 2022 - April 2023**
- Developed R package for application of novel statistical testing framework
    - Implemented multi-population "Sex difference in allele frequency" test developed in followup paper to
    Major sex differences in allele frequencies for X chromosomal variants in both the 1000 Genomes Project and gnomAD
- Conducted exploratory data analysis of 2504 whole genome dataset from the 1000 Genomes Project
    - Performed analysis on Google Cloud Platform, utilising Docker containers for environment management

PROJECTS

Newtapp Social Media Application Prototype (https://github.com/CSC207-UofT/course-project-newtapp)
- Developed interest based social media full-stack application with a Java backend and React-JS frontend
- Deployed PostegreSQL database for data storage
- Designed backend API server to handle user account creation, user conversations and user text posts

Fantasy Premier League Statistics Scraper (https://github.com/Yukthiw/FPL)
- Python web scraper using BeautifulSoup to scrape football player data from www.fbref.com and Fantasy Football API
- Developed data cleaning and feature engineering pipeline for automated data processing
- Trained and tuned XGBoost Regressor for optimised player point projections

EDUCATION

3.77/4.0 GPA across all Math, Stats and Computer Science Courses (21 courses)
Coursework, Statistics and Computer Science Concentration, **University of Toronto**   **2021-2023**
- Completed upper level courses in Algorithms and Data structures, Databases, Operating Systems and Machine Learning

Honours Bachelor of Science, Life Science Major, **Queen's University (3.67 GPA)**   **2016-2020**