Jerry Hou

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SKILLS & ABOUT ME

Languages: Java, C++, C, JavaScript, Python, SQL, Swift, Bash, Racket
Frameworks & Tools: Express, React, JQuery, Pandas, Tensorflow, Django, MongoDB, Git, Linux, Firebase, Postman, Sketch
Hobbies & Interests: Machine Learning, Finance, Competitive Programming, Chess

WORK EXPERIENCE

HUAWEI RESEARCH LAB | Software Engineer Intern   Markham, Ontario | Jan 2022 – Apr 2022 (expected)
- Implementing various SQL query operators support in OmniRuntime using C++ and Java
- Applying SQL query performance optimizations using code generation, parsing, and vectorization
- Designing and implementing translator modules to convert SQL queries to Java operations

REKAMMEND | Software Engineer Intern   Vaughan, Ontario | May 2021 – Aug 2021
- Designed and implemented backend REST APIs using Express.js and MongoDB for user data storage and retrieval, user metrics collection, usage tracking, and in-app suggestions
- Optimized machine learning model and added support for Numpy input, storage and extraction, reducing model compile time by 54% , improving model response time by 56% and increasing recommendation click-rate by 12%.
- Iterated designs for iOS mobile app interface using Sketch. Designed trial studies and conducted interviews to obtain feedback and suggestions from target audience to incorporate into final design.
- Implemented final app design using SwiftUI, worked on middle-end development to ensure app and services functionality
- Designed and implemented data analytic dashboards using Python and Pandas to visualize user preferences, usage patterns and metrics stored in MongoDB.

DUOWEI EDUCATION | Teaching Assistant   Richmond Hill, Ontario | Nov 2019 - March 2020
- Taught mathematics concepts, CS algorithms and data structures such as BST, BFS to students in grade 9 to 11.
- Students have scored 90+ percentiles in the Canadian Computing Competition (CCC) and Euclid Math Contest.

PROJECTS

FOODFIND (HACK THE VALLEY 5) ⬈   JavaScript, React, Google Places API
- FoodFind allows users to easily filter cuisines in a group setting and provides restaurant recommendations.
- Employs Google Map and Google Places API to find nearby restaurants and provides relevant map guidance.

UWFLOW++ ⬈   JavaScript, JQuery
- Built Chrome extension to quickly preview a UWaterloo course's UWFlow ratings by hovering over course listing.
- Currently published on Chrome Extension Store

IMAGE REPOSITORY ⬈   JavaScript, React, Firebase
- Image repository webapp that allows users to upload their images and search them via keywords or descriptions.

AWARDS & HONOURS

WILFRID LAURIER UNIVERSITY & TD CYBER SECURITY CASE | Semi Finalist   Waterloo, ON | Nov 2020

2019 EUCLID MATH CONTEST | Top 20% Score   Waterloo, ON | April 2019

EDUCATION

University of Waterloo   Waterloo, ON | 2020 - 2025
BMath. Mathematics, 2A
Coursework: Algorithm Design and Data Abstraction, OOP, Probability, Statistics, Intro to Combinatorics