Meixin (Maxine) **Zhang**

Computer Science at UWaterloo

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Programming Languages

C / C++ • Python • C# • SQL
HTML • CSS • JavaScript
TypeScript • R • Scheme • Bash

Technologies

Node.js • jQuery • Angular
Git • LaTeX • Vim • MatLab
Robot Operation System (ROS)

Accomplishments

Elle Hacks 2019, 1st Place
Hubdoc Hack 2019, 1st Place
2018 Dean's Honours List

Activities

Member of Waterloo Aquadrone Machine Vision Team
Technology Executive at UW Finance Association
Math Ambassador at UWaterloo
Latin Dance Club Representative

Relevant Courses

Object-Oriented Development
Intro to Combinatorics (Advanced)
Linear Algebra (Advanced)

Interests

Orchestral Violin Player
Latin Dance Performer
Drawing and Painting

Education

University of Waterloo

Bachelor of Computer Science
Co-operative Program
Business Specialization
Global Experience Certificate

April 2022 | Waterloo, ON

Relevant Experiences

Google | Software Engineering Intern — C++
Waterloo, ON | *May – August 2020*

- Contributing to the open-source TensorFlow Extension repository

Deloitte | Data Science Intern — Python, SQL
Toronto, ON | *January – April 2020*

- Processed data and created interpretable forecasting models for client projects
- Developed generalized exploratory data analysis (EDA) scripts and a cross-validation module for the internal cross-client codebase, reducing task completion time by 50%
- Built a text-based search and question answering engine using DistilBert pipeline and BM25+, with 95% confidence that top 5 outputs provide the correct answer(s)

Selected Projects:

Physician Prescription Behavior | *8 weeks*

- Proposed and built significant features in an interpretable linear model that identifies driving factors for new prescriptions, increasing the performance of the model by 8%
- Ensured accuracy and minimal noise with comparison models and residual analysis

COVID-19 Occupancy Forecast | *3 weeks*

- Developed a full data science pipeline for forecasting COVID-19 hospital equipment demand using a regression model with interactions, achieving an accuracy of 90%

Hubdoc | Robot Platform Software Developer — JavaScript, Node.js
Toronto, ON | *January – April 2019*

- Redesigned and refactored asynchronous scraping scripts and processing algorithms, led to improvement of robot efficiency and success rates by as much as 80%
- Trained neural networks to localize login fields and developed a model to classify login states with 90% accuracy, which further automates document fetching process

Projects

IPlanner | Interactive Agile Planner — C#

- Researched and implemented Principal Component Analysis (PCA) algorithm using C# to narrow down the most influential factors for the success/failure of a sprint
- Analyzed program outputs and presented new evaluation methods and critical success factors for Agile practices in 20+ teams

ParkIt | Automated Parking System — JavaScript, Node.js

- Designed and built a web app that integrates machine vision and cloud platform for licence plate recognition, automating payments, and storing parking history
- Implemented RESTful API endpoints with Node.js that to facilitate real-time communication between hardware, the user portal, and the database

WATonomous | Autonomous Vehicle Path-Planning — C++, ROS

- Developed software for an SAE Chevrolet Bolt competing in the GM/SAE Autodrive Challenge using weight-based cost map evaluation and D* route planning algorithms
- Implemented a parameter server compatible with ROS to update program constants at runtime, reducing 20+ hours of recompiling time at testing during release cycles