Meixin (Maxine) **Zhang**

Computer Science at UWaterloo

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Programming Languages

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

Technologies

Git • LaTeX • Vim • Beam
Node.js • jQuery • Angular
Google Cloud Platform (GCP)

Accomplishments

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

Activities

Co-Lead of Waterloo Aquadrone Machine Vision Team
Technology Executive at UW Finance Association
Math Ambassador at UWaterloo
Cuban Salsa Club Representative

Interests

Orchestral Violin Player
Latin Dance Performer
Drawing and Painting

Relevant Courses

Algorithms
Object-Oriented Development
Linear Algebra (Advanced)

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 — Python, GCP
Mountain View, CA (Remote) | *May – August 2020*

- Implemented additional features that handle multi-tensor models in TensorFlow Extended (TFX) inference component, expanding TFX and TFLite use-cases
- Redesigned the TFX inference component to run on Arrow RecordBatch, achieving pipeline input standardization and improving modular space-time efficiency by 20%
- Developed a utility module to transform RecordBatch to JSON strings, which supports inference for models stored in remote locations

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

- Developed a full data science pipeline for forecasting COVID-19 hospital equipment demand using a regression model with interactions, achieving an accuracy of 92%
- Proposed and built significant features in an interpretable regression model that identifies driving factors for prescriptions, leading to valuable insights for the client
- Developed generalized exploratory data analysis (EDA) scripts and a cross-validation module for the internal cross-client codebase, reducing task completion time by 50%

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

- Redesigned and refactored asynchronous scraping scripts and processing algorithms, leading 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, further automating the document fetching process

Projects

IPlanner | Interactive Agile Planner — C#

- Researched and implemented a 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

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

- Developed software for a 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

ParkIt | Elle Hacks - Automated Parking System — JavaScript, Node.js

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

CQA-19 | COVID-19 Question Answering Machine — Python

- Built a text-based search and question answering engine using DistilBert pipeline and BM25+, with 95% confidence that the top 5 outputs provide the correct answer(s)