Meixin (Maxine) **Zhang**

Computer Science at UWaterloo

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Skills

Programming Languages

C | C++ | Python | SQL
HTML | CSS | JavaScript
C# | R | Scheme | Bash

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Other 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
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 Engineer Intern — Python, GCP

Mountain View, CA (Remote) | May – August 2020

- Implemented additional features for handling multi-tensor models in the 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 Scientist 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 Intern — 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 Principal Component Analysis (PCA) 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 the hardware, user portal, and 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)