Alvin Lai

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Skills

Languages: Python, C#, Java, C++, JavaScript, SQL
Databases: MySQL, MongoDB
Tools/Frameworks: ASP.NET, React, Django, AWS, Git, Docker, NodeJS
Certifications: Software Design & Architecture Specialization, IBM AI Engineering, Toastmasters International

Professional Experience

Miovision - *Software Developer*   Sept. 2020 - Dec. 2020
Javascript, jQuery, C#, AWS, Terraform, ASP.NET   *Waterloo, Ontario*

- Designed and developed new analytics framework using **jQuery** and Segment API, capturing **20** unique events across **200+** daily users
- using **AWS Parameter** and **IAM Roles**, eliminating security vulnerabilities

Miovision - *Software Developer*   Jan. 2020 - Apr. 2020
C#, AWS, ASP.NET, SQL, NUnit   *Waterloo, Ontario*

- Developed an event-driven service to monitor user login activity using **AWS Lambda** and **EventBridge** to send metrics to Datadog
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- Added automated tests with NUnit framework, increasing test coverage by **20%**

Lumentum - *Software Developer*   May 2019 - Aug. 2019
Python, VB.NET, OpenCV, SQL   *Ottawa, Ontario*

- Developed a computer vision script (**OpenCV**) using **Python** to analyze tubing sealing quality, eliminating manual validation of over **500 images** per day
- Built an automation software in **VB.NET** to aid in manufacturing of optical devices, improving process cycle times and reducing manual inputs
- Wrote a database migration shell script to ensure consistency between local and QA database, removing the need to manually run stored procedures

KingTiger Technology Inc. - *Junior Engineering*   Aug. 2018 - Dec. 2018
C++, Python, OpenCV, VBA   *Toronto, Ontario*

- Automated R.A.M inspection process using **C++** and **OpenCV**, identifiying orientation of R.A.M module, saving **10+ minutes** of manual sorting
- Programmed a barcode scanner application using **Python**, **Z-Bar**, and **dlib**, allowing users to upload over **150** company assets

Projects

Messenger - Full Stack Web Application

- Developed a web application for communication between users utilizing token authentication, RESTful calls, and ORM (**mySQL**)
- Software design pattern is based on **MVC** model; front-end generated using **React**, **HTML**, and **CSS** to call RESTful API, which communicates with a **Django REST** back-end

RateMyIdea - Serverless Application

- Engineered a serverless
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FishAI - Mobile (iOS) Application

- An iOS application developed in **Swift** used to classify fish species based on a photo taken by the user
- Created and trained deep learning **neural network (CNN)** using **Keras**, deployed model to **CoreML**, and created a script to build image dataset leveraging Bing API

Education

University Of Waterloo   *Waterloo, Ontario*
Candidate of B.ASc: Honours Mechanical Engineering,
Artificial Intelligence Option   *Graduating Sept. 2021*
GPA: 3.9/4.0
Dean's Honours List: F2017 & W2019 - *Top **10%** of class*