Ming Xu

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OBJECTIVE

Seeking full-time SDE position starting from July, 2020

EDUCATION

● **Brown University** **Providence, RI, USA**

- Master of Computer Engineering, GPA: 3.7/4.0 Aug. 2018-May 2020
- Courses: C++ Scientific Programming, Machine Learning, Computer Vision, Modern Web Application, AI.

● **Harbin Institute of Technology** **Harbin, Heilongjiang, China**

- Bachelor and Master of Mechanical and Electrical Engineering, GPA: 3.8/4.0 Sep. 2007-June 2013

WORK EXPERIENCE

● **Alexa, Amazon Device** **Seattle, US**

SDE Intern Jun. 2019- Sep. 2019

Intern Project: ***Local Execution of Simple Routines*** Sep. 2016-June. 2017

- Optimize the whole architecture of the service to execute Alexa routines
- Identify simple and complex routines and select suitable dispatcher for different routines
- Use AWS Step Function and AWS Lambda to manage the complex workflow of complex routines
- Use local service provider to execute simple routines directly
- **Result:** Save over 4000 dollars on AWS services per month. Improve the overall latency of executing a simple routine by over 300ms.

● **2012 LAB, Huawei Technology** **Shenzhen, China**

Software Development Engineer Sep. 2016- May. 2018

Senior Automation Engineer July. 2013- Sep. 2016

Project: ***Development of Manufacturing Analysis Software for Optics Factory*** Sep. 2017-June. 2018

- Build the software tool communicating with the manufacturing execution system(MES) in json format by socket communication by C# and C++
- Implement analysis and visualization of huge amount of manufacturing data.

Project: ***Development of Active Alignment Machine for Transmitter Optical Sub-assembly*** Dec. 2015-June. 2016

- Design the software by C# and C++, controlling all the stages, sensors and other devices to operate automatically
- Enhance the usability of the machine by providing script programming and parameter configuration function
- **Result:** In the past, the cycle time(CT) was **over an hour**, and the first pass yield(FPY) was less than **80%**. By using our machines, the PFY is above **95%**, and the CT is reduced to less than **25 minutes**. Considering the great improvement of efficiency and yield, several millions was saved.

SELECTED PROJECTS

Project: ***Contour Generation based Conditional Generative Adversial Neural Network*** Feb. 2018- May. 2019

- Utilize a Conditional Generative Adversial Neural Network(C-GAN) to generate contour of a image
- Optimize the C-GAN to detect boudary of a image

Project: ***3D Simulator of Solar System*** Nov. 2018- Dec. 2018

- Implement a 3D object renderer with multiple functionalities supporting shadows, surface reconstruction and texture mapping under **QT** and **OpenGL**.
- Accelerate the computation of real-time dynamic parameters for all astronomical objects by using **C++ AMP**

Project: ***Low-level image processing*** Sep. 2018- Nov. 2018

- Design a geometric model for computation of vision odometry involving smoothing and filtering algorithms
- Optimize low-level image processing method by applying dynamic programming and optimized filters using matlab

SKILLS

Programming Language: *C++, C#, Java, Python, Matlab*

Front-end development: *HTML5, CSS, JavaScript, react.js*

Database: *MySQL, Mongo DB, SQLite3*