Ming Xu

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OBJECTIVE

Seeking full-time intern as a software engineer starting from May, 2019

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 Routine* 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

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

Software Engineer Sep. 2016- May. 2018

Senior Automation Engineer July. 2013- Sep. 2016

Project: *Development of Manufacturing Analysis Software for Optics Factory* Sep. 2016-June. 2017

- 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: *Personal Website of a photographer* Dec. 2018- Feb. 2019

- Build the the the whole pages for a photographer who is studying in School of Visual Art
- Design the dynamic component of photo uploading interface. Utilize **Ajax** and **SQLite** to capture and manage photos uploaded by user
- Handle the uploading photos and store the files on server by utilizing **AWS S3 Bucket**.

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*