

Baiyu Huang

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EDUCATION:

University of Southern California - Los Angeles, CA

Master of Science in Computer Science(Data Science)

May 2020

Bachelor of Science in Computer Science

May 2017

TECHNICAL SKILLS:

Languages: C++/C, Java, Matlab, Python, C#, HTML, CSS, JavaScript, JQuery, MySQL, Django

Tools: ROS, Arduino, Android, RaspberryPi, OpenGL, OpenCV, Unity, DirectX, Unreal Engine,

Programming areas: Computer Vision, Image Processing, Computer Graphics, Games, Web

WORK EXPERIENCE:

USC Viterbi School of Engineering - Los Angeles, CA

Aug 2018-Present

Teaching Assistant for ITP-165 Introduction to C++ Programming

- Tutored student in individual and group basis to reinforce programming concept and received excellent feedback
- Ran weekly office hour and lab to assist student in assignments

Kidtronics - Los Angeles, CA

May 2018-Present

Co-founder and Software Engineer

- Implemented frontend and backend of Electron application with HTML/CSS and Javascript
- Designed and implemented microcontroller communication protocol and hardware PCB design

Technologies: Javascript, HTML, CSS, ReactJS, Electron, C++, Arduino, Eagle PCB

Haas Automation - Oxnard, CA

Nov 2017-July 2018

Software Engineer

- Optimized CNC machine code interpreter using Java and increased interpreter jump feature efficiency 200 times
- Innovated a new way using matlab, C++, ML and OpenCV to implement broken tool detection using camera and achieve the accuracy of 98%
- Added new features to Java swing front end user interface

Technologies: Machine Learning, Matlab, C++, OpenCV, Java, Swing

Taskit - San Mateo, CA

April 2018-May 2018

Backend Software Engineer

- Designed and implemented node database and API for Taskit web application and iOS app.

Technologies: Python, Django, Neo4j

Link To iOS app : <https://itunes.apple.com/us/app/tas-kit/id1434337562?mt=8>

PROJECTS:

Siemens AR Hololens - Augmented reality application for engineer inspecting design by wearing Hololens

- Created algorithm for QR detection, tracking, recognition and model positioning in Unity with C#

Android Multipurpose App- An android app that has weather, map, and dictionary search features.

- Designed and implemented friendly UI, notifications based on current weather, and word search.

Java game server and database - An online matches capable java soccer game

- Implemented the player profile database in MySQL and client server communication using TCP.

Game Engine - A game engine with essential features

- Implemented phong shading, texturing, normal mapping, collision, animation and basic physics.

LEADERSHIP

USC Aerial Robotics

Sep 2014-Sep 2016

Computer vision Team, Team Leader

- Used OpenCV to implemented roomba detection, and image correction
- Led a team of five to cooperate with firmware team and design a ROS node communication

Technologies: OpenCV, C++, ROS, Raspberry Pi