

# MICHAEL MA

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## UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN BACHELOR'S IN COMPUTER SCIENCE AND STATISTICS

May 2022  
GPA – 3.3/4.0

### AMAZON

Software Development Intern

Phoenix, AZ  
May – August 2020

- Implemented new UI features using Angular for internal rules engine responsible for auditing seller promotions
- Improved efficiency for non-technical employees to customize the engine via internal JS scripts and new UI elements
- Facilitated code stability with automated testing of new and old components of the engine via Mocha

### BASSINSIGHT

Software Developer

Urbana, IL  
August 2019 – Feb 2020

- Led a team of six in the development of the app “Bass Vision” in Flutter on the Google Play and Apple App store
- Implemented fishing lure image processing for visualizing weather conditions via Flutter’s foreign function interface
- Developed object detection utilizing Otsu thresholding for image extraction of lure images on a dynamic background
- Integrated maximum sighting metric through calculating light attenuation through various water conditions in R

### GOTEK7

Full Stack Intern

Calais, France  
June – August 2019

- Analyzed real-time GPS data from over 40 trackers to monitor a graphical geofence using the GL3000 interface
- Developed GPS data parsing tool on a LAMP stack to graphically show geofences and target locations
- Built and deployed an automated unit number entry system with React Native and Python Selenium
- Assembly of physical tracking devices by soldering motherboard, I/O, and SIM cards together before being shipped

### FRUITS TECHNOLOGIES

Software Development Intern

Beijing, China  
July – August 2018

- Optimized physics and rendering engines for Chinese Apple App Store game “Ghost Story City” with Unity and C#
- Implemented dynamic downsizing of polygon counts via LoD and camera movement smoothing algorithms
- Optimized physics collisions by replacing mesh colliders with primitive colliders, improving overall efficiency by 20%

### TRADELINK

Data Analyst Intern

Chicago, IL  
May – August 2017

- Overhauled legacy data collection bash scripts to Python Pandas with a 30% improvement in real-world runtime
- Data cleaning on large historical data sets (>100 GB) for imperfections before long term storage
- Automation of option and future position decision advising based on expiration time

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## PROJECTS

- 95% test accuracy using a CNN built with PyTorch on the CIFAR-10 dataset of 60000 images, using convolution and batch normalization with skip layers to allow deeper models without a vanishing gradient
- Optimized autism screening in adults via spectral clustering and PCA to identify major reoccurring features that may help design a shorter and more precise screening process

## SKILLSET

### Deep Learning

Scikit-learn, Scipy, Tensorflow, Torch

### Statistical Analysis

R, SAS, Seaborn, Pandas, Elastic Stack

### App Development

React Native, Flutter, Angular (JS/TS)

### General

Python, Java, C++

## COURSEWORK

### Computer Science

Data Structures

Programming Languages and Compilers

Programming Algorithms

Discrete Structures

### Statistics and Mathematics

Methods of Applied Statistics

Advanced Data Analysis

Statistical Computing & Programming

### Deep Learning

Applied Machine Learning

Applied Deep Learning

Unsupervised Learning

Artificial Intelligence

### Economics

Applied Econometric Machine Learning

Economic Forecasting

High Frequency Trading