

# MAGGIE CAO

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## PROFILE

Energetic software developer who loves to develop applications using high-tech implementations. Self-starter with hands-on experience in machine learning using Keras and Tensorflow, multiprocessing, object-oriented programming and cloud computing. Currently building a mobile AI application that will be deployed into an IOS app in several months.

## SKILLS

*Love Python*  
*Comfortable with C/C++*  
*Tensorflow/Keras*  
*Anaconda/Jupyter Notebooks*  
*Google Cloud*

*SSH*  
*Raspberry Pi/Arduino*  
*Digital Logic Design*  
*Git/Subversion*  
*Linux*

*Vim*  
*Eclipse*  
*Virtualbox*  
*Docker*  
*OOP*

## WORK EXPERIENCE

### Happy Landing Games — Freelance Software Developer

*New York, NY - Mar. 2018 – Present*

- Working with two Brooklyn College alumni to develop a mobile game application in Unity.
- The script and graphics of the game are created by independent writers, animation and graphic design experts.

### Star Scholars Academy — Private Tutor

*Brooklyn, NY - Apr. 2018 – Present*

- Interactively directs lessons in mathematics and writing during one-on-one sessions to educate charter, high school and college students.
- Organizes and engages young students with technology and programming using Arduino and digital electronics.

## VOLUNTEER EXPERIENCE

### PostgresConf US 2018 — Conference Access

*Jersey City, NJ - Apr. 18, 2018 – Apr. 20, 2018*

- Assisted with registration by answering questions attendees had about the event, such as times of conferences and video availabilities.
- Welcomed attendees and professional speakers by distributing PostgresConf souvenirs.

### Big Data NYC — Registration

*New York, NY – March 7, 2018*

- Guided with the registration of participants in the evening of exciting talks from data science industry leaders and experts.

## EDUCATION

### Brooklyn College — B.S. in Computer Science

*Brooklyn, NY - Sep. 2014 – Dec. 2017*

*GPA: 3.39/4.00*

Selected Coursework: Group Projects I, Workstation Programming, Information Security, Design and Implementation in Java, Analysis of Algorithms, Operating Systems, Object-Oriented Programming

### Cooper Union – Irwin S. Chanin School of Architecture

*New York, NY - Sep. 2008 – May 2013*

Selected Coursework: Digital Logic Design, Microcontroller Projects, Computer Architecture

## PROJECTS

### **AI Fashion Mobile — Spark, Python 3**

*Apr. 2018 - Present*

- Developing an IOS application for classifying fashion brand names in real time video analysis and image recognition.
- Scraping modern fashion data from the web using Python and Spark.
- Deployment will be using a mobile net architecture.

### **Simple Shapes Classification using CNN — Keras, Python 3**

*Sep. 2017 – Dec. 2017 - 3.5 mos. | [https://mahgieeee.github.io/cnn\\_project\\_details.html](https://mahgieeee.github.io/cnn_project_details.html)*

- Trained a convolutional neural network that can classify 2-D shapes on a Google Cloud VM.
- Test set performed at a 90% accuracy with a 1% loss on 20,000 images.

### **Mirai Botnet Research/Testing — Linux, MySQL**

*May 2017 - 1 mo. | <https://mahgieeee.github.io/MiraiSecurityProject.pdf>*

- Executed the Mirai source code using two Linux servers.
- Analyzed the cross-compiling processes, loaders and CNC tables that were necessary for master and bot configurations.

### **Rotate K Game — Google Code Jam, OOP, C++**

*Apr. 2016 – May 2016 - 3 mos. | [https://mahgieeee.github.io/Google\\_Code\\_Jam/Board.html](https://mahgieeee.github.io/Google_Code_Jam/Board.html)*

- Formed a two-player board game where the board can be rotated once.
- The winning board has the same k-matched colors horizontally, vertically and diagonally.

### **Simulation of OS — C++**

*Apr. 2016 – May 2016 - 2 mos.*

- Handled software interrupts and used process scheduling algorithms to emulate the job processes of an operating system.
- Program handled I/O and other requests made by a secondary program.

### **Microcontroller Parallel Park Car — Arduino**

*Mar. 2012 – May 2012 - 3 mos. | <https://mahgieeee.github.io/microcontroller.html>*

- Built the mechanisms of a mini-robotic car, which had a motor shield, IR sensors, dc motors, gear box and servos.
- Wirelessly controlled the directions of the car's movement and created an Arduino implementation that could automatically parallel park on its own in between two objects.

### **Simple Enigma Machine — Digital Logic Design**

*Mar. 2011 – May 2011 - 3 mos. | [https://mahgieeee.github.io/Enigma\\_Machine\\_Project.pdf](https://mahgieeee.github.io/Enigma_Machine_Project.pdf)*

- Manually built the Enigma machine using letters A-H and 2 rotors.
- Self-designed the digital logic of analog circuits.