

# Michael Liang Li

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## Experience & Technical Skills

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### ImageSTEM

ASU School of Arts Media & Engr,  
Student Worker  
September 2020 – Present

- Designed modules to introduce artificial intelligence into grades 6-8 curriculum via computational cameras and the medium of Google Colab
- Implemented several computation photography techniques including direct and global lighting separation and image segmentation
- Researched relighting techniques using neural networks
- Scripted in Python and Windows batch to automate checking proper documentation, archiving and committing past projects to VisualSVN from Smartbear Collaborator
- Created scripts to log VisualSVN commits into the corresponding JIRA issues
- Built the LeNet-5 architecture in Keras, achieving 90% test accuracy using the MNIST and Fashion MNIST datasets
- Reached 75% test accuracy on the CIFAR-10 Dataset with 10 epochs

### Software Intern

Acme Aerospace, Tempe AZ  
August 2019 - April 2020

### Convolutional Neural Networks

ASU, CSE494  
August 2019 - December 2019

### CTF Challenges

ASU, CSE466  
August 2019 - December 2019

### Abstract Syntax Tree

ASU, CSE340  
January 2019 – May 2019

### Huffman Code

ASU, CSE310  
August 2018 – December 2018

- Executed a variety of exploit techniques in a lab setting
- Reverse engineered x86\_64 (AMD64) Linux binaries with Ghidra
- Wrote assembly code to exploit Linux systems and exploiting common insecure programming practices
- Testing Shell and Python scripts to attack vulnerabilities with brute force
- Developed an Abstract Syntax Tree to recognize a grammar, and parse for syntax and semantic errors
- Designed with scalability and easy modification in mind, using object-oriented design principles such as abstract base classes
- Implemented a Huffman compression algorithm in C++ to generate a tree as well as calculating the compression ratio.
- Tested and benchmarked average compression ratio and runtime.

Proficient in Python, C, C++, Java, Ubuntu Linux

Familiar with x86\_64 assembly, cron, SQL

## Education

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### Arizona State University

Bachelor of Science, Computer Science (GPA: 3.63)  
Minor in Studio Art  
Barrett, the Honors College

Tempe, AZ  
Expected: May 2021

## Volunteering and Community Involvement

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### Secretary/Race Team Member

ASU Dragon Boat  
August 2017 – September 2019

- Competed in San Diego, Tempe and Long Beach paddling competitions (2017-2018)
- Volunteered with the Iron Man organization as part of the security team, and with Boeing to clean and renovate the Desert Sun Child Development Center