

# weilue luo

☎ (+44) 07543295595 | ✉ weilue.luo@student.manchester.ac.uk | 🏠 luoweilue.com | 🌐 Redcxx | in weilue-luo-706376153

## Education

### University College London

MSC COMPUTER SCIENCE

- **Computer Graphics, Vision & Imaging** — Current

*London, United Kingdom*

2021 - 2022

### University of Manchester

BSC COMPUTER SCIENCE

- **Artificial Intelligence** — class 1 degree

*Manchester, United Kingdom*

2019 - 2021

### Bellerbys College

FOUNDATION

- **Computing** — top 5%

*Brighton, United Kingdom*

2019 - 2019

### Bartley Secondary School

SECONDARY SCHOOL

- **General Study** — top 5%

*Bartley, Singapore*

2017 - 2018

## Skills

**Computer Language** Proficient in Java, Python and CSS/HTML, decent in javascript, c/c++

**Human Language** Native Chinese and Cantonese speaker, decent in English.

**Other** Fluent in markdown, latex; familiar with AWS environment, Adobe After Effects, Premiere Pro and Media Encoder.

## Experience

### Amazon - Alexa Answer Generation

SOFTWARE DEVELOPER INTERNSHIP

- Built an experiment framework for different answering techniques, ran multiple experiments to create a highly rated proof-of-concept report with demo.
- Communicate with various teams and develop a simplified workflow for future experiments.
- Completed Internship with high rating and received a return offer.

*Java & Python*

*June - Sept 2021, Third Year*

### Amazon - Item Safety

SOFTWARE DEVELOPER INTERNSHIP

- Written multiple jobs that runs on daily basis to process billions of records with Amazon Amber, produce concise datasets for internal usage.
- Work with Elastic Search and Kibana to produce interactive dashboards for customers and helps to drive internal performance evaluation, progress tracking and long-term maintenance.
- Developed a Kibana Java package from scratch to automate creation of visualizations and dashboards.
- Complete the internship with high rating and received a return offer.

*Java*

*June - Sept 2020, Second Year*

### Collaborate Live

MAIN DEVELOPER

- Led a team of 7 to build an web application for code based interview.
- Awarded most appealing idea and highest technical quality prize (2/4 prizes) out of 37 projects
- Designed and built most HTML, CSS and functionalities.
- Implements real time chat, drawing, coding, online compiler and web-embed terminal using various libraries.

*HTML CSS Javascript*

*Jan - March 2019, First Year*

### Science X & Student Hack Event

UNIVERSITY OF MANCHESTER

- Implemented stand up and move around on Balboa V4 Robot based on its library using c++ and showcase on Science X Event.
- Created a cartoon theme for existing flappy bird game using Java.

*Sept. 2018 - Mar 2019, First Year*

## Projects

## Neural Music Generation Using Pytorch

Python

SOLE DEVELOPER

Nov 2020 - March 2021, Third Year

- Experiments to generate monophonic and polyphonic piano music via various architecture, including LSTM and encoder-decoder; performance of using different mechanisms such as residual connection, attention, batch/layer normalization are compared & analysed.
- You can find the full report in this [github repo](#).
- Samples of non cherry-picked generated tracks can be found in this [soundcloud account](#).

## Image Classification Using Pytorch

Python

SOLE DEVELOPER

Jan - Feb 2020, Second Year

- Transfer learning on a pre-trained resnet50 network.
- Classification of 10+ anime characters using 100+ pictures each, achieved over 90% accuracy.

## Propositional Logic Utilities

Java

SOLE DEVELOPER

Oct - Nov 2019, Second Year

- An Propositional Logic Formula manipulation tool.
- Implement various functions such as parse formula, push negations, eliminate implies and if-and-only-if connectives and convert to Conjunctive Normal Form.

## Mosaic Picture Generator

Python

SOLE DEVELOPER

Aug 2019, First Year

- Generate an image make up of other images, written in Python.
- Implemented various RGB euclidean algorithms, reshape and transform images.
- The full code and demo can be found in this [github repo](#).

## Image Downloader

Python

SOLE DEVELOPER

June - Aug 2019, First Year

- Pixiv (An image website) image downloader based on stimulating requests, written in Python.
- Designed and implemented an API supports automatic login, multi-threading downloading, capable of parsing various inputs and filter images.
- Created graphical interface that supports multi-core download, capable of downloading 1k images within 10 mins.
- Full code can be found at this [github repo](#).

## MP3 Music Player

Java

SOLE DEVELOPER

April 2019, First Year

- Fully designed and built a simple MP3 Player with GUI written in Java.
- Implemented functions such as play-stop, sort and filter, save-load database and editing song info.