

# Boyang Yan

I have two dreams, becoming a Computer Vision researcher and educated in the United States (American dream). Pursuing a dream is not going well. I meet the academic challenge in the third semester for my bachelor degree in computer science. I have failed a couple of subjects. My chosen subjects strategy is wrong, I have chosen too much core subjects at once. But, as you can be seen, my last year, average scores got distinction but average scores not good in total. On master study, I have stopped in the middle because if I finished that, I will no change pay tuition fee and study in the USA. In China University of Mining and Technology, I have a good academic record, but the English language is not good, so I have not successful go to the USA directly.

## Address

14-6-602 Zhuhuali  
Community,  
Huayuanxincheng  
Nankai District, Tianjin,  
China

## Experience

2018.12 - Now **Algorithm Engineer** Peng Chen Laboratory, Shenzhen, China  
Flight Control System Testing for fixed-wing UAV(Ardupilot), 3D Printing

## Contact Info

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yanboyang713

## Education

2018.1 - 2018.11 **Master of Research (Computer Science)** University of Wollongong, Australia

Metamorphic Testing (Software Testing)

**Main subjects:** Software Testing, Operational Research, Big Data Analysis, Natural Language Processing

**Main Achievement:** One published paper, Metamorphic Relations for Data Validation: A Case Study of Translated Text Messages

2014.3 - 2017.12 **Bachelor of Computer Science** University of Wollongong, Australia

Major in Software Engineering

**Main subjects:**

Algorithms and Data Structures(80 Distinction)

Object and Generic Programming in C++ (75 Distinction)

Interactive Computer Graphics (75 Distinction)

Multimedia Computing (73 Credit) software Engineering Practices & Principles (82 Distinction)

**Mark Progress:**

year 2014 avage mark: 63.25

year 2015 avage mark: 45.14

year 2016 avage mark: 57.00 - final project got 82 distinction

year 2017 avage mark: 76.25, distinction

**Main Achievement:**

1. The best final project prize(Human Research Management System base on Web)

2. First Three Semester had: Undergraduate Excellence Scholarship

2013.3 - 2014.3 **English for Tertiary Studies** University of Wollongong College, Australia  
Main subjects: Academic English

2011.9 - 2013.3 **Bachelor of Business Management** China University Of Mining And Technology

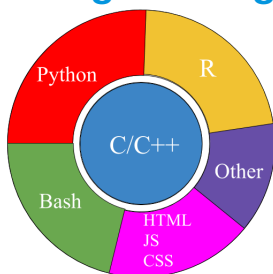
Average mark of 91% . Most of courses got High Distinction

**Main subjects:**

## Web & Git

github.com/yanboyang713  
yanboyang.com

## Programming



## OS Preference

GNU/Linux ★★★★★  
Unix ★★★★★  
MacOS ★★★★★  
Windows ★★★★★

**Languages**  
Chinese ★★★★★  
English ★★★★★

Mathematics 1: Algebra and Differential Calculus score: full mark  
Mathematics 2: Series and Integral Calculus score: 84

## Publications

Boyang Yan, Brian Yecies, Zhi Quan Zhou: Metamorphic Relations for Data Validation: A Case Study of Translated Text Messages. IEEE/ACM 4th International Workshop on Metamorphic Testing (MET '19), in conjunction with the 41st International Conference on Software Engineering (ICSE '19), Montreal, Canada; 05/2019

## Certifications

2017 **The best final project prize** University of Wollongong, Australia

2017 **Amateur Radio Operator's certificate of proficiency (Standard)**  
The Wireless Institute of Australia (WIA)

2016 **Ross a. Hull memorial Vhf-Uhf contest**  
The Wireless Institute of Australia (WIA)  
Twelfth Place in Section A (Analog Modes, Best 7 Days) and Twelfth Place in Section C (Analog Modes, Best 2 Days)

2014 **Amateur Radio Operator's certificate of proficiency (Foundation)**  
The Wireless Institute of Australia (WIA)

2010 **The Second Place Prize Awarded, Tianjin School Sports Competition Award "92" National Games Tianjin**  
Tianjin Basketball Tryouts, China  
High school men's Group B. Primary and Secondary (Vocational) School Basketball Games. Have got the second grading certificate and title

## Training Courses

2012 **Intel innovation in EDUCATION** Intel Learn Program (Technical and Community)

## Scholarships

2014 **Undergraduate Excellence Scholarship** University of Wollongong, Australia  
*offers a 25% tuition fee reduction*

## Academy Congress and Conference

On August 11, 2017, I took part in the Institute of Electrical and Electronics Engineers (IEEE) Sections Congress (SC2017), in Sydney, showing my final year project about Human Resource Management System based on Web.

## Extracurricular Activity

I am a big fan of amateur radio (ham radio). This is my biggest extracurricular activity. In 2014, I have got my first amateur radio license (foundation license). At that time, my purpose is talking and learning English because I can talk or send a message with all over the world radio amateur. After my purpose is changed. I have found amateur radio have bigger relate with my major, computer science. Amateur radio is not only sent morse code, which becomes history. I am currently got my standard license. So, I am more and more using new technology for radio. Such as SSTV for the picture, D-STAR for digital mode voice transfer and data transfer. Even International Space Station(ISS) also have got amateur radio FM repeater. I am more and more focus on technique part for radio. I also take part in some amateur radio competition. For example, ross a. Hull memorial vhf-uhf contest. I have got Twelfth Place in Section A (Analog Modes, Best 7 Days) and Twelfth Place in Section C (Analog Modes, Best 2 Days)). This is only a part of my amateur radio activity.

## Research & Project

### Software Engineering Aspect

#### 2018 Testing in cross-language sentiment analysis

University of Wollongong, Australia

#### 2018 Metamorphic Testing in Text comparison tool

University of Wollongong, Australia

**Using metamorphic testing method for testing DIFF utility quality. I have totally create 10 metamorphic relations.**

#### 2017 Testing in machine translation software

University of Wollongong, Australia

**Using metamorphic testing method for testing and compare Google, Bing and Youdao machine translation software quality.**

#### Github Link:

<https://github.com/yanboyang713/Metamorphic-Testing-of-Machine-Translation-Software>  
git

#### 2015 UML in game shop

University of Wollongong, Australia

**Using UML construct a use case diagram, class diagram, interaction diagram, context diagram and data flow diagram for a game shop.**

## Multimedia Aspect

### 2017 OpenGL construct a room

University of Wollongong, Australia

**Using OpenGL construct a room with four walls and a floor, as well as two paintings, which are hung on separate walls, light, table and desk and so on.**

### 2017 OpenGL planetary system

University of Wollongong, Australia

**OpenGL program for a planetary system**

**Github Link:**

<https://github.com/yanboyang713/openGLPlanetarySystem.git>

### 2016 5th order low-pass Butterworth filter

University of Wollongong, Australia

**Using SDL develop a program to process signal using the 5th order low-pass Butterworth filter and to play the processed signal.**

**Github Link:**

<https://github.com/yanboyang713/butterworthFilter.git>

### 2016 image histogram equalization

University of Wollongong, Australia

**Using SDL develop a colour image display and enhancement program. The program enhances an image using histogram equalization and displays the enhanced image.**

**Github Link:**

<https://github.com/yanboyang713/histogramEqualizationImage.git>

### 2017 Tries Data Structure

University of Wollongong, Australia

**Doing some research about count unique word appear frequency and sort word frequency by**

decreasing count order. The main data structure is using tries to record each unique word.

**Github Link:**

<https://github.com/yanboyang713/tries-data-structure-count-unique-word-frequency>  
git

## 2017 simulate shop service

University of Wollongong, Australia

**This project is about simulate shop service drive by event not by time.**

**Github Link:**

<https://github.com/yanboyang713/simulate-shop-service>.git

## Security Aspect

### 2017 Rainbow Table

University of Wollongong, Australia

**Implementing a rainbow table for Anti-Hash Function write by c++**

**Github Link:**

<https://github.com/yanboyang713/rainbowTable>.git

## Hardware Aspect

### 2017 Swap Card System

University of Wollongong, Australia

**Swap card system for record attendance. I have using Arduino, raspberry pi, the level shifter, LCD controller and LCD screen. In raspberry pi, I have written by Python, using HTTP socket connect with Java backend. And using I2C bus connect with Raspberry Pi, Arduino and LCD controller. Level shifter for convert different volt in the I2C bus. RFID sense connects with Arduino. In Arduino, I have written by c++.**

## **Working Google Home control light**

University of Wollongong, Australia

**Using NodeMCU with Google Home control light at home.**

### **Database Aspect**

#### **2017 MYSQL Database**

University of Wollongong, Australia

**Using MYSQL doing human resource management system for final year project**

#### **2017 RDF Semantics Database**

University of Wollongong, Australia

**Using RDF semantics database for record movie data.**

### **Web Aspect**

#### **2016 Blog**

University of Wollongong, Australia

**making my own blog using Jekyll.**

#### **2014 Website based on Drupal**

University of Wollongong, Australia

**Creating Illawarra film Society website based on Drupal.**

### **Referral Info**

- George Zhou <zhiquan@uow.edu.au> Research Project
- Jack Yang <jiey@uow.edu.au> Research Project
- Eve Shaw <eve@uow.edu.au> English aspect
- Mark Freeman <mfreeman@uow.edu.au> undergraduate final project
- Casey Chow <caseyc@uow.edu.au> computer graphics aspect

- Tianbing Xia <txia@uow.edu.au> base programming aspect and database aspect

Oct 17th, 2018

Boyang Yan