

# Chang Shu

A/405/D Salisbury Court  
102 St. Leonard's Street  
Edinburgh, EH8 9RD

s1783039@sms.ed.ac.uk  
(+44) 7706874366  
Website: <http://www.ciaran.life>

## Education

**University of Edinburgh** - Edinburgh, United Kingdom 2017-2019 (expected)  
Candidate for B.S. in Computer Science

- With scholarship of £ 3000 / year
- Enrolled courses: Machine Learning and Pattern Recognition, Foundations of Natural Language Processing, Computational Cognitive Science, Computer Security, Operating System, Software Testing

**South China University of Technology** - Guangzhou, China 2015-2019 (expected)  
Candidate for B.Eng. in Computer Science (English Taught) GPA: 3.68/4

- University First-class Scholarship
- Finished courses: Data Structure, Algorithm Analysis, Artificial Intelligence, Database, Compiling Principle, Computer Organization and Architecture
- Honors: Honorable Mention, Interdisciplinary Contest in Mathematical Modeling of COMAP; Top 1000 out of 18,000+ contestants, Microsoft (China)'s and IEEE's BoP Coding Contest;

## Publication

Wei, Z., **Shu, C.**, Zhang, C., Huang, J., & Cai, H. (2017). A Short Review of Variants Calling for Single-cell-sequencing Data with Applications. *The International Journal of Biochemistry & Cell Biology*.

## Professional Experience

### Select Computer Science Projects

Project Manager and Programmer 2015-present

- Lecture Transcript (Currently supervised by Prof. Steve Renals): Designing and developing a real-time ASR system for generating lecture transcription based on the ASR toolkit Kaldi.
- Assistive Robot: Developed a voice command system with the Alexa Skills Kit and the Flask microframework on Raspberry Pi for an assistant robot playing reaction and memory training games.
- Android Game: Implemented a location-based mobile phone puzzle game with Google Map API which allows users to follow a map and collect lyrics which was scattered randomly as hints.
- Unity 3D Game: Implemented the enemies generating and chasing algorithm for a 3D shooting game developed based on Unity 3D engine with totally original models, scripts, and background music.
- Library Management System: Developed the UI based on Qt for the new desktop management application for library seats with reservation and consulting functions.

### Peerstar Network Technology Co., Ltd.

Shenzhen, China

Software Developer

2017

- Used Python scripts to establish remoted shell session for deploying servers to be functional nodes in CDN
- Designed a daemon for the usage of operation and maintenance which will return and redirect the error message into log file during the period of deploying

### Beijing Genomics Institute and SCUT Joint Laboratory for Bioinformatics

Guangzhou, China

Research Assistant

2016-2017

- Coded Python scripts to generate preset data for the adjustable boundaries of detecting bins for copy-number variations by using HPC (High Performance Computing) at school.
- Designed automatic copy-number variations detecting pipeline and uploaded packaged pipeline onto the BGI online platform.
- Improved and optimized the original features: providing visualization process, single nucleotide polymorphism detection, and enabling various inputs.

## Skills

**Programming Languages:** Skilled in Python, C++, Java; Intermediate in Matlab, Kotlin, SQL, Shell.

**Technical Skills:** Manipulating Linux System; Developing and Maintaining Software on Scalable Systems; Proficient in Software Testing and Version Control; Data Analysis with Python; Knowledge of Computer Network and Security; Rudimentary understanding in Machine Learning and Natural Language Processing.

**Language Skills:** Chinese(native); English (proficient); Japanese(Intermediate); Spanish(Beginner)