

Chang Shu

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Education

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

- With scholarship of £ 3000 / year
- 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
- 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 download 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 and Qt Sql 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 with hg19 genome database by using HPC (High Performance Computing) at school.
- Designed automatic copy-number variations detecting pipeline with Docker and uploaded packaged pipeline onto the cloud platform of Beijing Genomics Institute.
- 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)