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
- 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
- Assistant for the Elderly (Currently): Developing an assistant gaming robot for the elderly with Alexa Skills Kit and Raspberry Pi to maintain their cognitive fitness by playing reaction and memory games physically and verbally.
- Android Game Songle: 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 B3: 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 severs 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; 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)