

JIANGQI. ZHU

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EDUCATION

Beijing University of Posts and Telecommunications Beijing, China

International School, Supported by Queen Mary, University of London

B.E. in Telecommunications Engineering with Management. Sept. 2017 – Jun. 2021(Expected)

- **Overall GPA:** 92.13/100 3.83/4.0 (1/323 ranking)
- **Language:** TOEFL 110 (R 30/ L 28/ S 26/ W 26) GRE 328 (V 159/ Q 169/ AW 3.0)
- **Selected Awards:** National Scholarships, 2018, 2019 (Top 4 in the major)
Xiaomi Special Level Scholarship in 2020 (Top 5 in the university)
- **Related Courses:** Java Programming (95), Interactive Media Design and Production (96), Image and Video Processing (96), Internet Applications (97), Web Searching Technology (96), Data Structure (94), Probability Theory and Stochastic Process (99), Linear Algebra (99), etc.

RESEARCH EXPERIENCE

GWAS Visualization PARSE Project

Department of Statistics and Data Science, Yale University Jul. 2020 –present

- Wrote part of the thesis and self-learned biology related knowledge, such as GWAS, SNP, transcription regulation, etc.
- Realized the visualization of GWAS data by using the open source project GIVE browser.
- Utilized Python Django framework and Tornado framework for the project page design.
- Project web link: <http://parse.gersteinlab.org/>

SCAN-ATAC Project

Department of Statistics and Data Science, Yale University Mar. 2020 –Jul.2020

- Read the source code of the R language package wrswoR, and implemented the code with C++ and Python.
- Optimized the algorithms and reduced the time complexity from $O(n^2)$ to $O(n\log n)$, and realized reducing the sampling rate for 100 cells from 50min to 1min.
- Completed the design of the project webpage using Vue.js and Element UI.
- Project web link: <http://www.scan-atac-sim.gersteinlab.org/#/>

Judgement of News Main Event

KEG Lab, Tsinghua University Mar. 2020 –Nov.2020

- Extracted news headlines, news content, dates and other information from news websites with Python and stored them in a txt file in the form of json.
- Adopted Python to implement the EM algorithm in the paper, and applied this algorithm to count the correct rate of part-time staff's annotation data.
- Completed Mturk's front-end web page design.

INTERN EXPERIENCE

Intern, Front-end Department, ByteDance Jul. 2019 – Oct. 2019

I Vehicle Model Library Management System MIS Background Programming

- Developed the MIS system based on Vue.js and Element UI.

- Took charge of the related requirements of the product side; jointly debugged the interfaces with back-end colleagues for data transmission and communication.
- Cooperated with colleagues to debug the data structure of an interface about color, removed redundant data, and adjusted the codes for all pages that need to call this interface.
- Completed a larger version update, and reduced page opening speed from minutes to seconds.

II MIS Background Framework Migration

- Some of the project's web pages are based on a framework created by former employees.
- Researched this framework and migrated this part of the web page to the currently used Vue framework. In this way, subsequent modifications related to these pages will be more convenient.

III Supplier Mobile Terminal Demand Booking Pages Writing

PROJECT EXPERIENCE

Paper Information Statistics Visualization Project

College Students Innovation and Entrepreneurship Competition

Jul. 2019 –Jul.2020

- This is a project that obtains information about the algorithm-related papers in the top-level conferences from the thesis website. Through the project's website, we can directly query the topics, dates, application scenarios, and other information of these papers.
- Obtained related information with a web spider designed by Python. Used the appropriate python web spider framework and tools for different pages.
- Stored data in the MongoDB database and implemented data visualization with E-Charts.
- Completed front-end engineering with Vue.js and Axios. Completed back-end engineering with Java and Elasticsearch.

PUBLICATIONS

- SCAN-ATAC Sim: a scalable and efficient method to simulate single-cell ATAC-seq from bulk-tissue experiments. (Zhanlin Chen, Jing Zhang, Jason Liu, **Jiangqi Zhu**, Zixuan Zhang, Min Xu, Mark Gerstein)
<https://www.biorxiv.org/content/10.1101/2020.05.29.123638v1.abstract>

PROFESSIONAL SKILLS

Front-end Development:

- Proficient in using HTML/ CSS/ JS/ JQuery/ HTML5/ CSS3; Mastered ES6/ TypeScript

Back-end Development:

- Proficient in using Java / Python; Mastered Node.js / C / C++
- Capable of using Postman to do API interface writing and Mock data testing

Front-end Frame:

- Proficient in using Vue.js and have much relevant development experience; Mastered React

Database:

- Proficient in using relational database MySQL and non-relational database MongoDB

Others:

- Proficient in using version control tool git; Mastered machine learning