

EDUCATION

- Sept. 2016 - present** **University of Southern California, Los Angeles, California** **(GPA 3.92/4)**
- **M.S. of Computer Science and Ph.D. of Biomedical Engineering.** (Expected by May 2021)
- Sept. 2010 - Jun. 2014** **Huazhong University of Science and Technology, China** **Bachelor of Science** **(GPA 3.79/4)**

COMPUTATIONAL SKILLS

Programming & Scripting: Java, C/C++, Python, JavaScript, PHP, Swift, HTML/CSS, R, Linux Shell, SQL
Frameworks: Bootstrap, JQuery, Angular 7, React, Apache, node.js, MPI, OpenMP, OpenGL, CUDA

RESEARCH EXPERIENCES

- Sept. 2016 - present** **Research Assistant, University of Southern California, Los Angeles, California**
- Developed computational models to solve pharmaceutical problems using numerical simulation
 - Performed parallel scientific computing in MPI, OpenMP, and CUDA, and visualized results with OpenGL
 - Published three works in peer-review journals and presented works at three national conferences
- Sept. 2014 - May 2016** **Research Assistant, Rice University, Houston, Texas**
- Constructed a predictive model for an engineered light-inducible protein production system in Python
 - Implemented numerical optimization through quasi-Newton method and particle swarm optimizer
- May 2015 - Sept. 2015** **Bioinformatic Engineer, Novogene Inc., Beijing, China**
- Tested various unsupervised machine learning model based denoising techniques on single-cell RNA-seq data
 - Liaised with three other team members for three months and developed a new analysis pipeline for the company

SELECTED PROJECTS

- Jan. 2019 - May. 2019** **Web Application and Web Services Development: Product Search Website**
- Developed a product search website with sharing function using RESTful APIs from Ebay, Google and Facebook
 - Implemented the client-side with Angular 7 and used Bootstrap for responsive web design
 - Built the back-end program with node.js and PHP, used AJAX and JSON for communication
 - Website is deployed on AWS service: hw8-productSearch.us-east-2.elasticbeanstalk.com
- Jan. 2018 - May 2018** **Machine Learning Practices: Gene Sequencing Data Analysis and Tumor Image Generation**
- Analyzed gene sequencing data with a Hidden Markov model (HMM), parameterized model with expectation-maximization (EM) algorithm, and implemented classification with K-Means and Support Vector Machine (SVM)
 - Participated in writing a review about using generative adversarial networks (GANs) and multi-task learning (MTL) networks to address tumor image analysis problems
- Jan. 2016 - Apr. 2016** **System Implementation: Relational Database Construction**
- Implemented the Record/Page management, buffer manager, file sorting with TPMMS, B+ tree, SQL semantic checking and relational operations in C/C++, and connected pieces into a functional database
- Sept. 2015 - Dec. 2015** **Object-oriented Programming Practice: Multi-Teams Competitive Game Design**
- Built a flexible and scalable chatroom application in Model-View-Control (MVC) structure in Java
 - Created a hunt down game involving a competition of multiple teams with extending chatroom function
 - Practiced design patterns including Factory, Composite, Command, Strategy, Visitor, and Observer-Observable