

## EDUCATION

### COLUMBIA UNIVERSITY

M.S. in Computer Science  
Jan 2017 - Expected May 2018  
New York, NY

### TSINGHUA UNIVERSITY

Ph.D. in Biology  
Sep 2006 - Jan 2012  
Beijing, China

### WUHAN UNIVERSITY

B.S. in Biology  
Sep 2002 - Jul 2006  
Wuhan, China

## LINKS

Portfolio: [hu-jun.com](http://hu-jun.com)  
Github: [github.com/vibrioh](https://github.com/vibrioh)  
Linkedin: <http://bit.ly/2feRrQp>  
Google Scholar: <http://bit.ly/2xVZYic>

## COURSEWORK

Databases  
Advanced Database Systems  
Big Data Analytics  
Analysis Of Algorithms  
Artificial Intelligence  
Machine Learning  
Natural Language Processing  
Microservice/Cloud Apps

## SKILLS

### PROGRAMMING

Java • Python  
Javascript • R

### DATABASE:

PostgreSQL • SQLAlchemy

### WEB DEVELOP

HTML5 • CSS3  
Node.js • React.js  
jQuery • Bootstrap

### MACHINE LEARNING

Numpy • SciPy  
Pandas • ggplot2  
Scikit-learn • NLTK

### OTHERS

Git • Gulp  
OriginLab • Unix shell  
LaTeX

## WORK EXPERIENCE

### ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI New York, NY Postdoctoral Fellow | Apr 2012 - Dec 2016

- ↳ Developed lab custom pipeline for large-scale sequencing data analysis.
- ↳ Operated on the scientific computing supercomputer Minerva.
- ↳ Set up lab Linux workstation for data retrieval, storage and analysis.
- ↳ Built a novel matrix data analysis and visualization method with R.
- ↳ Assisted in tutoring 1 Ph.D candidate and 2 M.S. candidates.
- ↳ Led 10 projects and anticipated in 2 NIH grants application.
- ↳ Published 8 research papers, one in the best cardiology journal (IF=20).
- ↳ Presented findings at 4 internationally renowned conferences.

### J Cardiovasc Dis Res Guest Editor | Feb 2015 - Oct 2016

- ↳ Assigned 50 reviews for 11 articles, and decided acceptance/rejection.

### TSINGHUA UNIVERSITY Beijing, China

#### Research Assistant | Sep 2006 – Jan 2012

- ↳ Published 20+ research papers and oversaw lab members.

#### Undergraduate Advisor | Sep 2007 – Feb 2010

- ↳ Made academic advising and managed scholarship.

#### Olympic Media Village Volunteer | July 2008 – Aug 2008

- ↳ Led a hotel team of 70 volunteers and was certificated by 5-star hotel.

## PROJECTS

### REAL ESTATE MANAGEMENT Repository <http://bit.ly/2jh9Al9>

The website was designed for buyers to search and purchase, agents to register/login and list real estate properties, and the administrator to manage all the properties information. The application was achieved with Python/Flask, PostgreSQL/SQLAlchemy, and HTML5/CSS3/Javascript. The website was tested successfully on Google Cloud.

### ARRHYTHMIA VISUALIZATION Video Demo <http://bit.ly/2wRjr6z>

As seen in the video, the signal captured by voltage-sensitive dyes can be recorded as a series of  $100 \times 100$  matrices, up to 10,000 frames/s. Besides the regular analysis method, I developed a novel way using R/ggplot2 to calculate and display action potential duration alternans.

### LARGE-SCALE SEQUENCING Repository <http://bit.ly/2xgFR0O>

Began with data retrieval, storage and transformation, Chip-seq and RNA-seq analysis was involved 20+ bioinformatics packages. Due to the huge amount computing load, the mapping was achieved on the remote supercomputer. The visualization was built by R in local system.

## AWARDS

Permanent Residency via EB-1A (Alien of Extraordinary Ability) in 2015.

## PUBLICATIONS

Full Records <http://bit.ly/2xVZYic>

- [1]. Xie C\*, Hu J\*, Motloch LJ, Karam BS, & Akar FG. (2015). *J Am Coll Cardiol.*, 66(10), 1144-1156. (\*Equal, IF=19.896, 1<sup>st</sup> in cardiology)
- [2]. Hu J, et.al. (2012). *Eur J Pharmacol*, 674(2-3), 132-142.
- [3]. Hu J, et.al. (2012). *Afr J Pharm Pharmacol*, 6(14), 1069-1076.
- [4]. Hu J, et.al. (2011). *Food Chem Toxicol*, 49(6), 1455-1463.
- [5]. Hu J, et.al. (2010). *Tsinghua Sci Technol*, 15(4), 452-459.
- [6]. Hu J, et.al. (2008). *Tsinghua Sci Technol*, 13(4), 474-479.