Jun Hu

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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
Github: 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
⊢Academically advised undergraduates, 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 100×100 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, 1st 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.