

KAI LI

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WORK EXPERIENCE

BGI-Shenzhen

Jun 2017 - Present

Bioinformatician Bioinformatics platform, MS department

Shenzhen

- PDV project: took in charge of coding of this software using Java. The goal of this project was to develop an integrated proteomics data viewer. The functions including database searching results visualization, denovo sequencing results visualization, proteogenomics files (proBAM and proBED) visualization, public database data visualization and MS/MS data visualization. In addition, it also provides a GUI to proteoQC for data quality analysis. PDV is platform-independent and can be used through both GUI and command line modes.
- PDV applications: generated spectra annotation figures using PDV for several projects, including published paper (PMID: 29222161) and unpublished projects.

BGI-Shenzhen

Mar 2016 - May 2017

Bioinformatician (Internship) Bioinformatics platform, MS department

Shenzhen

- SWATH-expert project: took in charge of developing a GUI tool for XIC extraction and visualization for large scale SWATH dataset using Java language. It was a part of SWATH-expert which is a new tool for SWATH data analysis. This was a collaboration with Dr. Tiannan Guo from the laboratory of Dr. Ruedi Aebersold in ETH Zurich.
- Explored applications of the cutting-edge deep learning in proteomics data analysis. Predicated the peptide phosphorylation sites by convolutional neural networks (CNNs) based on MXNet.
- Learned to use Nextflow to build pipeline for RNA-Seq and Exon-Seq data analysis.

EDUCATION

Qingdao University (QDU)

Sep 2013 - Jun 2017

Bachelor Biotechnology (Genomics and Bioinformatics)

- GPA: 3.3 / 4.0
- Courses: Molecular Biology, Genomics and Bioinformatics, Python Programming, Data Mining, Data Structure and Algorithm Basics, Database System, Operating System, Digital Image Processing, Bioinformatics Algorithm etc.

BGI College

Mar 2016 - May 2017

- Courses: Statistic Applied in Bioinformatics, New Technology of Genomics, Bioinformatics Technology

Missouri State University (MSU) Springfield MO U.S.

Sep 2015 - Dec 2015

- Courses: Microbiology, Cellular Biology, Biology experiments training

PUBLICATIONS

- **Kai Li**, Marc Vaudel, Bing Zhang, Yan Ren, Bo Wen, "PDV: an integrative proteomics data viewer".
- Zhe Ren, Da Qi, Nina Pugh, **Kai Li**, Bo Wen, Ruo Zhou, Shaohang Xu, Siqu Liu and Andrew R Jones, "Improvements to the rice genome annotation through large-scale analysis of RNA-Seq and proteomics datasets".
- Tiannan Guo, Chao Xu, **Kai Li**, Bo Wen, Uwe Schmitt, Yi Zhu, Qing Zhong, Peter Wild, Siqu Liu, Ruedi Aebersold, "SWATH-expert: An expert system for the analysis of high-throughput quantitative proteomic data generated by SWATH mass spectrometry," (In preparation)
- Bingrui Li, Nianyu Li, Le Zhang, **Kai Li**, et al., "Hsa_circ_0001859 Regulates ATF2 Expression by Functioning as an MiR-204/211 Sponge in Human Rheumatoid Arthritis," *Journal of Immunology Research*, vol. 2018, Article ID 9412387, 8 pages, 2018.
- X. Wang, S. G. Codreanu, B. Wen, **K. Li**, M. Chambers, D. C. Liebler, and B. Zhang, "Detection of proteome diversity resulted from alternative splicing is limited by trypsin cleavage specificity," *Mol. Cell Proteomics*, p. mcp.RA117.000155, Dec. 2017.

LEADERSHIP EXPERIENCE

Art Work

Oct 2015

Planner of China exhibition area

Springfield MO U.S.

- Art Work was an official exhibition in the downtown in Springfield MO. Led a team of 15 members and took one week to collect materials, design and decorate the exhibition area and attracted more than 500 local visitors.

HONORS & AWARDS

- Outstanding graduate student of Shandong Province (5%) June.2017
- Third class scholarship in BGI College (7/71). 2016 - 2017
- Model Student of Academic Records in QDU (1/19) 2015 - 2016
- 1st prize of China High School Biology Olympiad (Shandong Province division 3%) 2011

MISCELLANEOUS

- **Skills:** Java (Advanced), Python (Basic), Linux (Basic), AWS (Basic)
- **Certifications:** Emergency medical technician (EMT-I)
- **Languages:** Chinese (Native), English (TOEFL: 91)
- **Activities:** AWSome Day for AWS training (Student), BGI Life Periodic Plan (Principal of dasypodidae)