LONG WANG

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EDUCATION

Carnegie Mellon University (CMU) Pittsburgh, PA   May 2018(expected)
Master of Science in Computational Biology
Huazhong Agricultural University (HZAU) Wuhan, China   Jul 2015
Bachelor of Science in Bioinformatics, Valedictorian

SELECTED COURSE PROJECTS

Retrieval Algorithms for Search Engine (Java | Independent)
- Implemented Boolean retrieval, BM25 and Indri ranking, learning-to-rank capabilities (pairwise SVM). retrieval algorithms.
- Implemented query expansion capabilities(pseudo-feedback) and diversification (PM-2 and xQuAD).
- Implemented various metrics to evaluate model performance.

Scrabble with Staff (Java | Independent**)**
- Performed object-oriented analysis and design (object model, sequential diagram, interactive diagram).
- Implemented core functions and tested game features and connected the implementation with GUI.

Geographic Data Visualization Framework (Java | Group)
- Designed and implemented a geographic data visualization framework that supports various data inputs and multiple display plugins.

Micro-colony simulator under variable constraints (Golang | Independent**)**
- Simulated a micro-colony formation under different environment constructions.

WORK EXPERIENCE

SemanticMD, Inc. Houston, TX.   May 2017–Aug 2017
Deep Learning R&D Intern
- Prepossessed on images and videos to filter out key information using computer vision algorithms
- Developed and implemented machine learning pipelines to: 1, identify sperm cell and recognize its class; 2. classifies diabetic retinopathy and glaucoma patients; 3. classify two-chambers vs. four-chambers ultrasound videos.

Jianbing's Laboratory *National Key Laboratory of Crop Genetic Improvement*. Wuhan, China. Aug. 2014–Jul. 2015
Research Assistant
- Developed a tree-based ensemble method to detect SNP associations with rare variants in maize
- Participated in maize genomes assembly

A paper as contributing author has been accepted in ***Nature Communication***.

Lingling's Laboratory *College of Informatics, HZAU*. Wuhan, China.   Jul 2013–Jun 2016
Research Assistant
- Developed an ensemble model to infer transcriptional regulation in prokaryote.
- Developed a computational method to predicted protein-protein interaction network; constructed the protein-protein pipeline of *Bacillus licheniformis* WX-02; analysed network features.
- Updated sequence and annotation of *Bacillus licheniformis* WX-02; analyzed asRNAs regulation under salt condition.

Have published two papers as participating authors in ***FEBS Letters*** and ***Scientific Reports***, respectively and another paper as first author has been accepted in ***Current Bioinformatics***.

SKILLS

Programming: Java, Python, R, Perl, Matlab, Golang, C++, Shell.
Tools: Git, Hadoop, Spark, Weka, Scikit-learn, OpenCV, GATK.

ACADEMIC HONORS AND AWARDS

MSCB Merit Fellowship, *Computational Biology Department*. *CMU, USA*.   Aug. 2017
Honorable Mention, Interdisciplinary Contest in Modeling, *Comap Inc*. *USA*.   Apr. 2014
First Prize, Chinese Undergraduate Mathematical Contest in Modeling, *Ministry of Education, China*. Nov. 2013
National Scholarship, *Ministry of Education, China*. *(for top 0.5% students)*   May 2012