

# LONG WANG

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## EDUCATION

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

## WORK EXPERIENCE

<b>SemanticMD, Inc.</b> Houston, TX.	Jul 2017–Aug 2017
<i>Deep Learning R&amp;D Intern</i>	
<ul style="list-style-type: none"><li>Preprocessed on images and videos to filter out essential features using computer vision algorithms</li><li>Developed and implemented machine learning pipelines to 1. identify sperm cells and recognize their classes; 2. identify diabetic retinopathy and glaucoma patients; 3. classify two-chambers vs. four-chambers ultrasound videos.</li></ul>	
<b>Jianbing's Laboratory</b> <i>National Key Laboratory of Crop Genetic Improvement.</i> Wuhan, China.	Aug 2014–Jul 2015
<i>Research Assistant</i>	
<ul style="list-style-type: none"><li>Developed a tree-based ensemble method to detect SNP associations with rare variants in maize</li><li>Participated in maize genomes assembly</li></ul>	
Have published one paper as a participating author in <i>Nature Communication</i> .	
<b>Lingling's Laboratory</b> <i>College of Informatics, HZAU.</i> Wuhan, China.	Jul 2013–Jun 2016
<i>Research Assistant</i>	
<ul style="list-style-type: none"><li>Developed an ensemble model to infer transcriptional regulation in Prokaryotes.</li><li>Developed a computational method to predict protein-protein interaction network; constructed the protein-protein pipeline of <i>Bacillus licheniformis</i> WX-02; analyzed network features.</li><li>Updated sequence and annotation of <i>Bacillus licheniformis</i> WX-02; analyzed asRNAs regulation under salt condition.</li></ul>	
Have published two papers as a participating author in <i>FEBS Letters</i> and <i>Scientific Reports</i> , respectively and a paper as the first author has been accepted in <i>Current Bioinformatics</i> .	

## SELECTED COURSE PROJECTS

<b>Retrieval Algorithms for Search Engine</b> (Java   Independent)
<ul style="list-style-type: none"><li>Implemented Boolean retrieval, BM25 and Indri ranking, and learning-to-rank capabilities (pairwise SVM) retrieval algorithm.</li><li>Implemented query expansion capabilities(pseudo-feedback) and diversification (PM-2 and xQuAD).</li><li>Evaluate performance by calculating and comparing different metrics.</li></ul>
<b>Scrabble with Staff</b> (Java   Independent)
<ul style="list-style-type: none"><li>Performed object-oriented analysis and design (object model, sequential diagram, interactive diagram).</li><li>Implemented core functions and tested game features and connected the implementation with GUI.</li></ul>
<b>Geographic Data Visualization Framework</b> (Java   Group)
<ul style="list-style-type: none"><li>Designed and implemented a geographic data visualization framework that supports various data inputs and multiple display plugins.</li></ul>
<b>Micro-colony simulator under variable constraints</b> (Golang   Independent)
<ul style="list-style-type: none"><li>Simulated a micro-colony formation under different environment constructions.</li></ul>

## SKILLS

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

## ACADEMIC HONORS AND AWARDS

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