LIQIANG **HE**

3405, NW, Orchard Ave, Apt 176, Corvallis, Oregon 97330 | C: 541-740-4022 | helq2612@gmail.com

Personal website: https://helq2612.github.io | LinkedIn: https://www.linkedin.com/in/he-liqiang-a64656b6

Education

M.S.:	**Computer Science**	Oregon State University	GPA: 3.6	**06/2017**
M.Eng:	**Mechanical Engineering**	Oregon State University	GPA: 3.5	**07/2015**
M.S.:	**General Mechanics and Basic Mechanics**	Southwest Jiaotong University		**07/2007**
B.S.:	**Mechanical Engineering**	Southwest Jiaotong University		**07/2004**

Technical Skills

Language:	R, Python, Java, C/C++, JavaScript, HTML, CSS, MATLAB
Library:	ggplot2, numpy, Theano, OpenMP, OpenCL, OpenGL,
DBMS:	MySQL, sqldf, MongoDB, Hadoop
Others:	Git, Caffe, AWS, Android Development, Web Development, Parallel Programming, LaTeX

Projects

CNN Deconvolution Boundary Detection: Python, C++, and Caffe
- Proposed a neural network architecture to detect boundaries in image by learning a CNN as feature detector, and deconvolve learnt features to restore images with clear contours.
- Achieved stable and reliable CNN Deconvolution Boundary Detection results.

HMM and CRF for POS Tagging: Python and NLKT
- Explored the HMM (Hidden Markov Model) and CRF (Conditional Random Field) with the POS Tagging problem.
- Achieved higher performance result out of the CRF model.

Housing Renting Suggestion: Python, MySQL, Pybrain, Scrapy
- Implemented Scrapy to crawl house ranting information on Craigslist.
- Used MySQL to join and project data from two schemas.
- Fitted a Neural Network Model by Pybrain library, the result showed acceptable accuracy (over 71%).

Work Experience

Research Assistant   **10/2015 to Current**
Oregon State University, Corvallis, Oregon, US
- Study a Semi-Parametric Framework for Class-conditional Label Noise in Dr. Rebecca Hutchinson's Group.
- First proposed a classification model with class-conditional label noise, where the noise features are separately from class features.
- Implement single-observation occupancy model in the R package "unmarked", and visualize results by R package "ggplot2".

Research Assistant, Oregon State University   **05/2014 to 04/2015**
Oregon State University, Corvallis, Oregon, US
- Innovated a micro-combustor of CH4 in Dr. Vinod Narayanan's research group.
- Achieved significant low heat loss by decreasing the critical length (channel height) f the device to 200 μm, with an improved combustion rate of fuel to 98% at low temperature (only 500 ^{o}C).

Manager of Biding & Project Management   **07/2007 to 02/2011**
Jinxiang Sports Facilities Engineering Co, Suzhou, Jiangsu, China
- Finished 21 projects, amount over $6,500,000
- Liaison with customers, including elementary school, mid/high school, and local governments.
- Leaded and managed a 23-persons' construction group, oversaw constructions of facilities.

Publications

Rebecca A. Hutchinson, Liqiang He, and Sarah C. Emerson. "Species Distribution Modeling of Citizen Science Data as a Classification Problem with Class-conditional Noise", in Proceedings of AAAI-17.