LIQIANG **HE**

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**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 , with an improved combustion rate of fuel to 98% at low temperature (only 500 oC).

**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.