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**

**Work Experience**

**Research Assistant 10/2015 to Current**

*Oregon State University, Corvallis, Oregon, US*

* Explored the idea of treating Species Distribution Models as a classification problem with class-conditional label noise in the context of citizen science data. This novel model outperforms all current methods used in ecology.
* Implemented a single-observation occupancy model using the R package “unmarked”, and visualized results with R package “ggplot2”.

**Manager of Biding & Project Management 07/2007 to 02/2011**

*Jinxiang Sports Facilities Engineering Co, Suzhou, Jiangsu, China*

* Finished 21 projects, with a total budget amounting to more than $6,500,000.
* Liaisoned with customers, including schools and local government.
* Built and Maintained strategic partnership with suppliers.
* Led and managed a 23-person construction group, and oversaw construction of facilities and sport fields.

**Technical Skills**

**Language:** R, Python, Java, C/C++, JavaScript, HTML, CSS, XML, MATLAB, Node.js, AngularJS, PHP

**Library:** ggplot2, numpy, Theano, OpenMP, OpenCL, OpenGL, Django

**DBMS:** MySQL, sqldf, MongoDB, Hadoop

**Others:** Git, Caffe, AWS, Android Development, Web Development, Parallel Programming, LaTeX, Unix

**Projects**

**Full-Stack Web Development: Website for** [**E.Cafe**](http://www.keccafe.com/) **at Oregon State University 01/2017 to Current**

**HTML/CSS/****JavaScript/JQuery/Node.js/Express.js/MongoDB/AJAX/AWS/MVC**

* Developing a commercial-use dynamic website supporting user log in, food ordering and payment.
* Working with AWS EC2, installing and administering Linux distributions such as Ubuntu and CentOS.
* Creating, updating, and maintenance of MongoDB database.

**House Rental Suggestion: Python/MySQL****/Pybrain/Scrapy 01/2017 to 03/2017**

* Developed a Python Spider to crawl house rental information from Craigslist using Scrapy framework.
* Used MySQL to join and project data from two schemas.
* Fitted a Neural Network Model with Pybrain library, generating results with acceptable accuracy (over 71%).

**CNN Deconvolution Boundary Detection: Python/C++/Caffe 01/2016 to 03/2016**

* Proposed a neural network architecture to detect boundaries in images by learning a CNN to be used as a feature detector, and deconvolved learned features to restore images with clear contours.
* Achieved stable and reliable CNN Deconvolution Boundary Detection results with over 83% accuracy.

**HMM and CRF for POS Tagging: Python/ NLKT 01/2016 to 03/2016**

* Explored the HMM (Hidden Markov Model) and CRF (Conditional Random Field) with the POS Tagging problem.
* Achieved higher performance results than the CRF model.

**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.