Ze-Yuan "Zack" Hu

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EDUCATION

University of Texas **Austin, TX** **Sept 2017 - Present**

- M.S. in Computer Science. (GPA: –/4.00)

University of Wisconsin **Madison, WI** **Sept 2010 - Dec 2014**

- B.A. in Computer Science. (GPA: 3.74/4.00)
- B.A. in Economics with Honors. (GPA: 3.85/4.00)
- B.A. in Mathematics. (GPA: 3.81/4.00)
- Recipient of 2013 Honors Summer Sophomore Research Apprenticeship
- Recipient of 2012 Meek Bishop Scholarship in Economics, *top 2 out of 500 economics major students*

WORK EXPERIENCE

Software Engineer **IBM** **August 2015 – August 2017**

DB2 LUW federation team

- Construct Hive & Impala wrappers to support federation database between traditional RDBMS and Hadoop-based data warehouse solution
- Create automated setup tools that reduce product configuration time by 75%
- Enhance server option optimization tools to reduce federation database performance tuning time by 90 % and enable the capability of tuning the product against Hive, Impala, and Spark
- Resolve over 20 defects, including a severe memory leak issue that impacted a $1.6 million deal. *Awarded IBM Manager's Choice Award 2016*

Research Assistant **UW-Madison** **May 2013 – April 2014**

- Applied Spatial Gaussian Process & Dirichlet Process on fMRI data and improved power of testing on predicting Dementia based upon pixel value of the scan by 5 %

Research Assistant **UW-Madison** **September 2012 – May 2013**

- Used Support Vector Machine technique to examine the impact of Feedback on children's learning outcomes
- Examined the statistical correlation between fMRI data and DTI data in measuring the brain activity of children during their learning process
- Created a data extraction & formatting toolkit in Python that can finish the processing of over 600 MB experimental data within 10 seconds

PROJECT

- **Neural Networks for Sentiment Analysis** (2017), feedforward neural network and convolution neural network for the sentiment analysis
- **Shift-Reduce Parsing** (2017), a shift-reduce parser using both a greedy model and a global model with beam search
- **Sequential CRF for NER** (2017), a system that uses HMM model for POS tagging and CRF model for NER
- **Watson Introspector** (2016), a cognitive tool built in Python on IBM Bluemix for understanding software, answering questions, and interacting with software architecture and data flows in 3D. *Awarded Second Prize in IBM China Development Laboratory Hackathon.*
- **OptiTimal** (2013), an android application that allows user to log their time usage and generate a simple statistical report that characterizes their time management style.
- **Checker** (2012), an AI engine developed in Java for checker game with alpha-beta pruning search algorithm, depth-first iterative deepening method.

TEACHING

- M408K Differential Calculus (Fall 2017, UT Austin)
  `https://www.ma.utexas.edu/users/pmorales/syllabus/syllabus.php?unique=53780`
  Teaching Assitant

SPECIALIZED SKILLS

- **Languages:** C++; C; Java; Shell; Python; SQL; MATLAB; R; STATA
- **Software:** DB2; Eclipse; ClearCase; *nix; Emacs; Vi; Maven; Hadoop; Hive; Impala; Sqoop2; Spark
- **Coursework:** Machine Learning, Structured Models for NLP, Human Computation & Crowdsourcing