# Ze-Yuan "Zack" Hu

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## EDUCATION

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

- M.S. in Computer Science. (GPA: 4.00/4.00)
- Coursework: Human Computation, Structured Models in NLP, Machine Learning, Natural Language Processing, Distributed Systems, Semantics

**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

- Constructed `Hive` and `Impala` wrappers with `C++ and Java` to support federation database between traditional RDBMS and Hadoop-based data warehouse solution
- Created automated setup tools with `Perl and Shell` that reduce product configuration time by 75%
- Enhanced server option optimization tools using `C` to reduce federation database performance tuning time by 90 % and enable the capability of tuning the product against Hive, Impala, and Spark
- Resolved 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 with `MATLAB` 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**

- Implemented SVM using `Python` 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 with `Python`

## PROJECT

- **Identifier Inference through Neural Network** (2017), built N-gram and Neural Network language models using `tensorflow` to study the *Identifier naming convention* problem
- **Shift-Reduce Parsing** (2017), built a shift-reduce parser from scratch using both a greedy model and a global model with beam search in `Python`
- **Sequential CRF for NER** (2017), implemented a system that uses HMM model for POS tagging and CRF model for NER in `Python`

## LANGUAGES AND TECHNOLOGIES

- C++; C; Java; Shell; Python; SQL; MATLAB; R;
- DB2; Eclipse; ClearCase; *nix; Emacs; Vi; Hadoop; Hive; Impala; Sqoop2;