Ze-Yuan "Zack" Hu

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EDUCATION

University of Texas **Austin, TX** **Sept 2017 – May 2019**

- M.S. in Computer Science. (GPA: 3.87/4.00)

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 Internship **Schlumberger** **May 2018 – August 2018**
HPC infrastructure team

- Implement a monitoring component of the in-house High-Performance Computing (HPC) engine to provide the fault tolerance and handle the "straggler" problem
- Employ SGD algorithm to dynamically learn the best timing for backup executions of the in-progress tasks based on the computation task characteristics
- Built a `C++` code generator that automatically generates the application layer code based on the engine API

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*

PROJECTS

- Jialin Wu[†], **Zeyuan Hu**[†], Raymond J. Mooney. "Joint Image Captioning and Question Answering" In *VQA Challenge and Visual Dialog Workshop at the 31st IEEE Conference on Computer Vision and Pattern Recognition* (CVPR2018) [1]
- **HyperPebblesDB** (2018), a Key-Value store that is part of LevelDB family with focus on reducing write amplification. Written in `C++`.
- **Distributed Key-Value Store** (2018), built a Distributed Key-Value Strore with `Python` that uses eventually consistency model with two session guarantees: *Read Your Writes* and *Monotonic Reads*.

[1] [†]Equal contribution

TEACHING

- NEU466M Quantitative Methods in Neuroscience (Spring 2018, UT Austin)
  `http://ctcn.utexas.edu/quantitative-methods-neuroscience/`
  Teaching Assistant
- M408K Differential Calculus (Fall 2017, UT Austin)
  `https://www.ma.utexas.edu/users/pmorales/syllabus/syllabus.php?unique=53780`
  Teaching Assistant

SPECIALIZED SKILLS

- **Languages:** C++, C, Java, Shell, Python, SQL, MATLAB
- **Software:** CMake, Autotools, Docker, Tensorflow, Keras, Git, ClearCase, Hive, Impala, Maven, Hadoop
- **Graduate Coursework:** Machine Learning, Structured Models for NLP, Human Computation & Crowdsourcing, Natural Language Processing, Semantics, Distributed Systems, Operating System

SERVICE AND SOCIETIES

- UTCS Master Admission Committee (Jan 2018 – March 2018), Member
- IBM Diamond & Ring Toastmaster Club (Jun 2016 - Jun 2017), President