Zanhua Huang

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EDUCATION:

- **Rice University,** Houston, TX. GPA: 4.00/4.00 Dec 2020
  Master of Computer Science
- **University of Michigan,** Ann Arbor, MI. GPA: 3.85/4.00 May 2019
  Bachelor of Science in Engineering, Computer Science
- **Shanghai Jiao Tong University**, Shanghai, China GPA: 3.50/4.00 Aug 2019
  Bachelor of Science in Engineering, Electrical and Computer Engineering

RESEARCH:

Reservation Guarantees for Distributed Servers Rice University Jun 2020 - Sep 2020

- This research is based on *pTrans*. We are trying to find ways to aggregate servers into one or more supernodes so that 1) parallelization among servers can be done 2) and/or to reduce communications between servers.

Inexact Bit Quantization For Neural Networks Rice University Mar 2020 - May 2020

- Proposed a novel quantization method on pre-trained neural networks which decides the bit-allocation to each parameter based on its influence. A compression ratio of 3x ~ 9x (no pruning) is achieved, without loss of accuracy.
- The influence is calculated based on partial derivatives.

Cognitive Disorder Prediction University of Florida May 2018 - July 2018

- Increased the accuracy of predicting cognitive disorder from 85% to 86% using SVD/PCA/CUR analysis and SVM.
- Used metabolic data and genetic data to predict human diseases.

PROJECTS:

Database System Implementation Rice University Feb 2020 - May 2020

- This is a course project and I built a database system from the ground up using c++. The system includes database management system architecture, query processing, and simple optimization.

Chatbot For Department of Design System Giti Tire/Shanghai Jiao Tong University Aug 2019

- Implemented a chat-bot that automatically answers engineers' technical questions based on provided FAQs with an accuracy higher than 98% (NLP). The chat-bot runs on a self-implemented web server (using Flask + Sqlite3).
- Used agile methodology to ensure the requirements of the company is satisfied.
- Capstone Design project at the Shanghai Jiao Tong University.

Multi-thread Library Implementation University of Michigan Sep 2018

- Implemented multi-threads library, a memory space manager, and a file system based on provided infrastructure in order to improve skills in multi-thread programming and improve understanding of multi-thread.

TEACHING ASSISTANTSHIP:

Artificial Intelligence Rice University Sep 2020 - present

- Held office hours, grade assignments, and deliver recitation classes to students enrolled in Artificial Intelligence. Topics include search algorithms, game trees, MDP, CSP, Bayesian Network, and Neural Networks..

***Applied Machine Learning in Python*, at Coursera** University of Michigan May 2018 - May 2019

- Answered students' questions in the course *Applied Machine Learning in Python*. Questions include topics in regressions, kernelized support vector machine, random forests, confusion matrix, data leakage and etc.

Undergraduate Honors Mathematics Shanghai Jiao Tong University, China Sep 2016 - Aug 2017

- Held office hours, graded assignments, delivered lectures (weekly) to facilitate test reviews for students enrolled in Honors Mathematics and to build communication skills. Topics include calculus and linear algebra.

SKILLS:

- **Language:** native Chinese, working level of English, conversational Japanese.
- **Computer Language:** Python, C++.
- **Selected Computer Courseworks**: Operating System (EECS 482, UMich), Machine Learning (EECS 445, UMich), High Performance Computing (COMP 526, Rice), Database Management and Implementation (COMP 530, Rice), Web Development (EECS 485, Umich), Game Design (EECS 492, UMich).

HONORS:

- Dean's List & University Honors (at the University of Michigan and Shanghai Jiao Tong University).
- James B. Angell Scholar (at the University of Michigan).
- MCM/ICM Honorable Mention.
- Chinese Mathematics Competitions (CMC), Third Prize.