Enhao Zhang

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EDUCATION

University of Michigan, Ann Arbor, MI   Sept. 2018 – Present (expected Apr. 2020)
- Major: Computer Science
- Overall GPA: 4.00/4.00
- Core Courses: *Machine Learning, Database Management System, Computer Security, Cryptography, Algorithms and Data Structures, Computer Organization, Foundations of Computer Science.*

Shanghai Jiao Tong University, Shanghai, China   Sept. 2015 – Present (expected Aug. 2020)
- Major: Electrical and Computer Engineering
- Overall GPA: 3.98/4.00
- Core Courses: *Programming and Data Structures, Signals and Systems, Logic Design.*

RESEARCH EXPERIENCE

Study of Personalized Active Learning, Research Assistant   Jan. 2019 – Present
Advised by Professor Nikola Banovic
- Independently develop the study platform, consisting of a Google Chrome extension *Photo Tagger*, a computing server, a database server and a web server, which provides several functionalities such as extracting photos from users' social media websites, querying images and updating alt texts.
- Deploy Django applications on Apache server to ensure production and security; design the data analysis and storage solutions using python and MySQL database such that both querying speed and user confidentiality are addressed.
- Reduce image querying cycle from 150 seconds to 3 seconds.

Video Database Analytics System, Research Assistant   May. 2019 – Present
Advised by Professor Michael Cafarella
- Implement a video database system by constructing multiple classifier cascades of 360 smaller classifiers that improves querying speed over the user given classifier by 39 times.
- Design a video database architecture that improves query time by 7 times compared to naive scan and filter with 50% space tradeoff.
- Train and fine-tune multiple LSTM classifiers predicting economic product category that achieved up to 96% accuracy in 113 classes classification, including preprocessing and cleaning of data with variously inconsistent quality.

PROJECT EXPERIENCE

Database Project   Jan. 2019 – Mar. 2019
- Designed ER diagrams that meet specific constraints and translated them to database tables.
- Gained experience with Oracle JDBC and completed complex SQL queries that ensure both correctness and efficiency.
- Implemented three database structure, namely linear hashing index, external merge sort and grace hash join using C++.

Machine Learning Project   Feb. 2019 – Mar. 2019
- Designed and trained SVM models to classify the sentiment of social media review.
- Constructed deep CNN models to classify photos on 10 classes and utilized autoencoder in the unsupervised setting.

LC-2K (Little Computer 2000) Simulation Project   Sept. 2018 – Dec. 2018
- Simulated the execution of a simplified version of computer, LC-2K (Little Computer 2000), in C language.
- Implemented LC-2K assembler, behavioral simulator, linker, pipeline simulation, and cache simulation.

LEADERSHIP AND ACTIVITIES

Media Department of the Student Union, Vice Director   Aug. 2016 – Apr. 2017
- Trained 20 students in news photography from the use of DSLR camera to news photography techniques.
- Taken photographs and video records for 15 major events of the institute, including New Student Convocation, Graduation Party, 10th Anniversary Ceremony of Joint Institute, Design Expo.

Academic Writing Course, Teaching Assistant   Sept. 2016 – Apr. 2017
- Graded 8 different essays of 25 students.
- Held office hour 2 hours a week to answer students' questions and help them revise their essays.

SELECTED HONORS AND AWARDS
- 2016-2017 Undergraduate National Scholarship
- 2016-2017 Undergraduate Scholarship (Class A)
- 2016-2017 Distinguished Academic Achievement Award
- 2017 Interdisciplinary Contest in Modeling, Honorable Mention
- 2018 Cheng Family Scholarship

SKILLS
- Computer: C, C++, Python, Oracle SQL, HTML, JavaScript, Matlab, Verilog HDL, Latex, Mathematica
- Language: Mandarin (native language), English (TOEFL iBT: 111, GRE: 330+4)