Enhao Zhang

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Education

- **University of Washington** Seattle, WA
  Ph.D in Computer Science *Sept. 2020 – Present*
  - Advisor: Prof. **Magdalena Balazinska**
- **University of Michigan** Ann Arbor, MI
  Bachelor of Science Engineering in Computer Science *Sept. 2018 – Apr. 2020*
  - Overall GPA: 4.00/4.00
  - Advisors: Prof. **Nikola Banovic** and Prof. **Michael Cafarella**
- **Shanghai Jiao Tong University** Shanghai, China
  Bachelor of Science in Electrical and Computer Engineering *Sept. 2015 – Aug. 2020*
  - Overall GPA: 3.97/4.00 (Ranking: 1^{st}/202)

Publications

- **VOCAL: Video Organization and Interactive AnaLytics (Vision Paper)**
  - Maureen Daum*, Enhao Zhang*, Dong He, Magdalena Balazinska, Brandon Haynes, Ranjay Krishna, Apryle Craig, Aaron Wirsing. CIDR 2022. (* indicates equal contributions)
- **Method for Exploring Generative Adversarial Networks (GANs) via Automatically Generated Image Galleries**
  - Enhao Zhang, Nikola Banovic. CHI 2021.

Honors and Awards

- **Cheng Family Scholarship**, Joint Institute, Shanghai Jiao Tong University, 2018
- **Interdisciplinary Contest in Modeling**, Honorable Mention, 2017
- **Distinguished Academic Achievement Award** (Academic performance in the top 2% of class), Joint Institute, Shanghai Jiao Tong University, 2016
- **Undergraduate National Scholarship** (Top 7 students in Joint Institute), Ministry of Education of People's Republic of China, 2016

Research Experience

- **VOCAL** Seattle, WA
  Advised by Prof. Magdalena Balazinska and Prof. Ranjay Krishna *Sep. 2020 – Present*
  - Propose an interactive video analytics system to support efficient data cleaning, exploration and organization, and compositional queries, even when no pretrained model exists to extract semantic content.
  - The system automatically learns compositional query specifications from user feedback, while minimizing the user's labeling effort
- **GAN Explorer** Ann Arbor, MI
  Advised by Prof. Nikola Banovic *Sep. 2019 – Sep. 2020*
  - Designed an interactive tool for Generative Adversarial Network (GAN) exploration, where users can assess capabilities and limitations of a GAN via interactive visual examination.

- Used a Markov Chain Monte Carlo (MCMC) method for automated image gallery generation, which enabled quick creation of many diverse, photo-realistic image galleries to support qualitative evaluation of GANs.

- **Video Database Analytics System** Ann Arbor, MI
  Advised by Prof. Michael Cafarella *May. 2019 – Jan. 2020*
  - Researched and optimized a video database system supporting binary content-based queries, by constructing CNN classifier cascades in replace of the complex user-supplied classifier and constructing a multiresolution video dataset from the original dataset.
  - Tested the database system on a dashcam dataset and achieved 5x speedup with 5% accuracy tradeoff.
  - Implemented a graphical user interface with Streamlit for the system.

- **Economic Product Price Prediction** Ann Arbor, MI
  Advised by Prof. Michael Cafarella *May. 2019 – Jan. 2020*
  - Predicted prices of economic products, from highly imbalanced dataset, based on product descriptions that were not human interpretable and category names.
  - Preprocessed and cleaned data with inconsistent quality; explored different bin ranges for each category.
  - Built and fine-tuned a price predictor using LSTM for each category, with 82 categories in total.

- **Study of Personalized Active Learning** Ann Arbor, MI
  Advised by Prof. Nikola Banovic *Jan. 2019 – Nov. 2019*
  - Investigated user-computer interaction in machine learning algorithms, where user provides training labels to machine-end and machine learning method realizes user personalization.
  - Designed and developed a query-based image retrieval system using active learning strategies with various functionalities, including extracting photos from user's social media account, querying images and updating alternate texts.

Mentoring Experience

- **Past Undergrad students:** Brian Yao, Chongjiu Gao, Lyons (Daoyi) Lu, Yichi Zhang
- **Past High school students:** Anish Chaudhuri, Parie Kumar

Professional Service

- **Reviewer** – CHI 2022, CSCW 2022

Tutoring Experience

- **Grader for EECS 370** – *Intro. to Computer Organization*, UM *Winter 2019*
- **TA for VY200** – *Academic Writing II*, instructed by Cynthia Vagenitti, SJTU *Spring 2017*
- **TA for VY100** – *Academic Writing I*, instructed by Cynthia Vagenitti, SJTU *Fall 2016*