Zezhou Huang

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Education

- **Columbia University** — New York City, NY
  Master of Science in Computer Science; Major GPA: 4.00 — *Sep. 2019 – Present*
- **University of Wisconsin-Madison** — Madison, WI
  Bachelor of Science in Computer Science; Major GPA: 3.95 — *May. 2019*

Experience

- **Columbia University** — New York City, NY
  Graduate Research Assistant — *Sep. 2019 – Present*
  - **Complaint driven Visualization**:
    Build an interactive visualization system using **D3.js** as front end and **Flask** as back end.
    Provide an interface for Columbia University IRS to clean dataset with more than 10,000 records.
    Use online learning with **Tensorflow** to recommend repairs given complaints.
  - **Distributed Deep Neural Network Inspector**:
    Build a system to study the activation of **Keras** Deep Neural Network on **Google Cloud**.
    Use **Kubernetes** and **Ray** to leverage parallel and distributed computing.
    Evaluate the system with VGG Deep Neural Network Models.
- **University of Wisconsin-Madison** — Madison, WI
  Undergraduate Research Assistant — *July. 2018 – May. 2019*
  - **Disguised Missing Value Detector**:
    Implement the Disguised Missing Value Detector based on the research paper using **Python**.
    Combine multiple detection features including syntactic patterning, repeated patterning and statistical modeling.
    Optimize the data structure to detect disguised missing values from dataset with 8,000 records in 2 minutes.
  - **Micro Cloud Labeler**:
    Build a web interface to help users label data using **Apache**, **MySQL**, and **Python**.
    Use **Docker** to containerize the application and deploy the micro service on **AWS**.
  - **Managed Storage Hierarchy in WiscKey**:
    Evaluate the read and write performance of **WiscKey** and **LevelDB** on solid-state drives in **GO** and **C++**.
    Study the **LSM tree** in depth and hack its inner data structure to improve its performance.
    Add a layer between **LSM tree** and APIs to balance the read and write performance.
- **East China Normal University** — Shanghai, SH, China
  Undergraduate Research Assistant — *July. 2016 — July. 2017*
  - **Analysis of Housing Prices in Shanghai**:
    Collect, filter and clean 12732 pieces of data from website using web crawler in **Python**.
    Estimate housing prices through hedonic price models using **ArcGIS** and **R**.
    Publish "Spatial and hedonic analysis of housing prices in Shanghai" in Habitat International as the first author in July 2017.

Programming Skills

- **Programming**: Most familiar with Java, Python, Go, JavaScript, SQL. Also used in the past projects: C, C++, Scala.
- **Web Building**: Familiar with HTML, CSS, JavaScript, jQuery, React, Express.js, D3.js, Node.js, React, Flask, PHP.
- **Technologies**: Git, PostgreSQL, R, MATLAB, AWS, Google Cloud, Spark, Docker, Kubernetes, Gurobi.