

# HAOYANG LING

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## EDUCATION

### Master of Science in Information (Big Data Analytics Track)

University of Michigan, Ann Arbor

Apr 2024

Ann Arbor, MI

- Excelled in mathematics, data mining, MySQL, and database coursework with GPA 4.0/4.0.
- Learning natural language processing, data visualization, and linear programming theory.

### Bachelor of Science in Electrical and Computer Engineering

Shanghai Jiao Tong University

Aug 2023

Shanghai

- Excelled in mathematics, data science, and computer science coursework with GPA 3.9/4.0.
- Obtained praise for instructing students in physics and circuit theory as Teaching Assistant.

## PROJECT EXPERIENCE

### Web Developer / ChatGPT-based Simple Summarizer

University of Michigan, Ann Arbor

Mar 2023 – Apr 2023

Ann Arbor, MI

- Developed a ChatGPT summarizer by React with keyword highlighting and readability ease to improve user comprehension, increasing user trust and adoption.

### Data Analyst / Livable Residence Evaluation System at New York

University of Michigan, Ann Arbor

Mar 2023 – Apr 2023

Ann Arbor, MI

- Designed and implemented a user-friendly livability assessment system, earning highly complimentary feedback from all five test users.
- Conducted user testing and data analysis to continuously improve the system's usefulness.

### AI Researcher / Machine-Generated Text Detection for ChatGPT

University of Michigan, Ann Arbor

Feb 2023 – Apr 2023

Ann Arbor, MI

- Discriminated statistical information of machine-generated text to propose an explainable classifier, achieving comparable predictability to BERT-based models.
- Performed a thorough analysis of data augmentations on response length, identifying that truncated sentences can decrease the model performance by around 5%.

### Big Data Analyst and Developer / Music Recommendation with Spark

Shanghai Jiao Tong University

Jul 2022 – Aug 2022

Shanghai

- Accelerated parallel breadth-first search with Spark 10x faster than that with MapReduce in the self-deployed cluster after compressing the dataset with a 2% ratio by Apache Avro.
- Employed the PageRank algorithm within ego-nets to generate diverse recommendations.

### AI Research Assistant / Contrastive Learning on Graph Representation

Shanghai Jiao Tong University

Mar 2022 – Aug 2022

Shanghai

- Augmented graph data with random masking and self-attention after comparative analyses to enhance the model's robustness, surpassing baseline models in 5 out of 9 datasets.

## WORK EXPERIENCE

### Web Developer / AI Assistant for Mcity

Michigan Traffic Lab, University of Michigan

Apr 2023 – Now

Ann Arbor, MI

- Implemented a chatbot for Mcity by feeding the scraped website contents to the model with LangChain, deepening people's understanding of Mcity within five minutes.

### Consultant / User Experience Enhancement of BSP Assessment

Professional Consultation Services, Inc.

Sep 2022 – Dec 2022

Northville, MI

- Summarized raw data from the interviews with six participants into about 150 affinity notes.
- Streamlined company workflow by delivering nine suggestions in the action-priority matrix.

## SKILLS

Data Analysis	Python, Hadoop, Spark, SQL, Tableau, Altair
Machine Learning	Pytorch, Tensorflow, Sklearn
Tools and Languages	C/C++, Java, Linux, Git, Vivado
Web Development	HTML5, JavaScript, Django