

# Michael (Yicong) Mao

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## Education

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### Brown University

Providence, RI, USA

B.Sc. COMPUTER SCIENCE

2017 - 2021

- AI/ML and Systems Pathways
- Honors in Computer Science

### Beijing No.4 High School

Beijing, China

HIGH SCHOOL

2014 - 2017

## Professional Experience

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2021-2023 **Software Engineer**, Microsoft

- Developed Nucleus, a software that enables local syncing and serving of existing SharePoint web application data to speed up current experiences and provide offline capabilities to online-only web applications.
- Created a system that stress tested Nucleus by automatically performing random actions and verifying that the end states are as expected.
- Migrated Nucleus to support the Microsoft Files web application.

2020 **Software Engineer Intern**, Microsoft

- Created a compact role selector and introduces improved UI and UX in 3 different sharing dialogs.
- Introduced a new component to Microsoft Fluent UI library to support the new UI.
- The new UI is used more than 27 million times per month.

2018, 2019 **Intern**, Shukun Technology

- Developed software and algorithm to automatically roughly label arteries in chest CTA images with user interface for data labeling purposes.
- Ran experiments on mixed precision computer vision models as early exploration for adapting in-house algorithms to mixed-precision.
- Developed tools for team to automatically collect CTA image from production machines.

## Publications

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### PUBLISHED

A Ilkhechi, A Crotty, A Galakatos, **Y Mao**, G Fan, X Shi, U Cetintemel. 2020. DeepSqueeze: Deep Semantic Compression for Tabular Data. SIGMOD '20: Proceedings of the 2020 ACM SIGMOD International Conference on Management of Data.

## Teaching Experience

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2019 **Brown University CSCI 1460/2460 : Computational Linguistics**, Head Teaching Assistant

- Developed course material including a general course plan, new homework assignments, supplementary labs, and stencil code and example solutions for homework assignments.
- Answered questions on course materials during weekly TA hours.
- Managed a team of 8 undergraduate and graduate TAs on TA hours, assignment grading, and other course-related work.

## Research Experience

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**Brown University***Providence, RI, USA*

ADVISOR: PROF. UGUR CETINTEMEL

*2017-2018*

- Semantic compression of tabular data using deep learning.
- Assisted in Dr. Amir Ilkechi in early-stage experimentation.

**Brown University***Providence, RI, USA*

READER: PROF. EUGENE CHARNIAK

*2020-2021*

- Honors Thesis: "Tackling Overfitting in Video Language Inference"
- Explored methods of suppressing overfitting for a transformer model on the Violin video language inferencing dataset.

## Outreach & Professional Development

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### SERVICE AND OUTREACH

2020-2021 **Brown Data Science Club**, Workshop Team Lead2019-2020 **Brown Data Science Club**, Workshop Team Member

### PERSONAL PROJECTS

**OKAI**, Website - <https://okai.brown.edu>

- The project aims to demystify and introduce Artificial Intelligence concepts to a broader audience with limited or no background in computer science. It utilizes web-based interactive graphics and animations to visualize the working principles of Artificial Intelligence.
- Conceptualized the materials and writing 5 out of the 6 chapters.
- Website has over 160K pageviews and 38K users.