

ZIQING (JACK) ZHAO

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EDUCATION

Hampshire College - Amherst, MA

September 2013 - May 2017

Bachelor of Arts, Major in Mathematics

Overall GPA: 3.75/4

Honors Thesis: *Topological Changes of Global Autonomous Systems*, chaired by Amherst College Professor Tanya Leise

Advanced courses: Topology, Lie Algebra, Representation Theory, Stochastic Processes, String Theory

RESEARCH EXPERIENCE

PhD Student

Sept 2020 - Present

Emily Ryan, Department of Mechanical Engineering, Cambridge, MA

- Used MFIX to simulate flow through pipe with filter
- Used machine learning algorithms to interpolate simulation results for design of experiments

Research Assistant

June 2019 - May 2020

Mingda Li, Department of Nuclear Science & Engineering, MIT, Cambridge, MA

- Trained the graduate students on studying machine learning to prepare them for future projects.
- Organized biweekly journal club meetings on machine learning in material science, and presented papers read.

Technical Associate

February 2018 - May 2019

Stacy Springs, Center of Biomedical Innovation, MIT, Cambridge, MA

- Webscraped information of food safety inspection from Chinese government websites.
- Modified Deep Neural Network for classification tasks.
- Wrote programs to automate cleaning data for further data analysis.

Research Assistant

September 2017 - December 2017

Ethan Meyers, Center for Biological and Computational Learning, MIT, Cambridge, MA

- Analyzed accuracy of neural decoding analysis.
- Tested the generalization ability of AlexNet on pop-out tasks.
- Analyzed firing rates of AlexNet with pure color inputs.

Undergraduate Research Assistant

June 2016 - August 2016

Gabriel Sosa Castillo, Mathematics Department, Amherst College, Amherst, MA

- Conjectured that there are monomial orders other than lexicographic, graded lexicographic, and graded reverse lexicographic orders, which can be uniquely defined by their induced orders.
- Proved that an infinite family of monomial orders that can be uniquely defined by their induced orders.

Undergraduate Research Assistant

June 2015 - December 2015

David Hanneke, Physics Department, Amherst College, Amherst, MA

- Wrote Python programs to generate pulse sequences for ground-cooling Beryllium ions.
- Modified a program in assembly language to communicate with the microcontroller for sending laser pulses.

WORKING EXPERIENCE

Software Engineer

June 2019 - Present

Ningbo Erwan IMP. & EXP. CO.,LTD., Tustin, CA

- Developed python software package for underwater robot control.

Tutor

September 2018 - May 2019

Tutoring Plus of Cambridge, Inc., Cambridge, MA

- Tutored high school and middle school students from low-income-families on mathematics and chemistry.
- Taught middle school students programming in Python.

SKILLS

Computer Languages

Python(proficient),TensorFlow, R, C++, Mathematica, MATLAB, L^AT_EX, MIPS