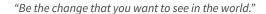# Charles **Zhang**

1600 Grand Avenue, Saint Paul, MN

📱(+1) 612-859-0081 | ✉ zzhang4@macalester.edu | 🏠 zcczhang.github.io | 🔲 zcczhang | in charleszzz

"Be the change that you want to see in the world."

January 20, 2020

Susan Fox

DEPARTMENT CHAIR AND PROFESSOR

MATHEMATICS,STATISTICS, AND COMPUTER SCIENCE DEPARTMENT

MACALESTER COLLEGE

SAINT PAUL, MN 55105

Dear Professor Fox,

About Me

I was thrilled to see your listing for the research: ***Adaptive Robot Navigation: Building Robots That Learn*** for Summer 2020. As a highly passionate Mathematics and Computer Science student at Macalester College with a solid background in mathematical modelling, programming, and data analysis, I am confident that I would be a strong addition to your team.

Why This Research?

While competing in the Mathematical Contest of Modelling for drones light show, I was responsible for building mathematical models to determine the drones' locations and flight routes based on the configuration transformed by pictures using MATLAB and Python. Experience in this project allowed me to hone my modelling skills and the ability to present non-technical design to mathematical languages and programming. At that time, I was indulged in the beauty of combination among mathematics, computer programming, and piratical applications, so now I yearn for learning and then unveiling the much more impeccable system for the localization and navigation of robotics involved with computer vision in your research, improving my understanding of the deep learning and providing me experience for further study of artificial intelligence in graduate school in the future.

Why Me?

I am a self-motivated and fast learner. I love learning extra knowledge that I am interested in by myself. In the winter break, I learned machine learning and I won 13th place out of 19526 teams and individuals(0.06%) in Kaggle Data Science competition building models in Python for the prediction of house prices. I long for a deeper understanding of machine learning as well as deep learning and neural network, so I am learning OpenCV and Tensorflow in Python(R) now by myself. Therefore, I wish eagerly that I can have this opportunity working with your research to learn computer vision and deep learning deeply and systematically. I am not only a self-learner but also a born team player. In the last semester, I collaborated with two other students at Macalester College and won 9th place in the Mathematical Association of America-North Central Section(MAA-NCS) Team Contest.

For your convenience, I have attached a resume that further outlines my relevant skill set, experience, and accomplishments. Thank you for your consideration, and I look forward to hearing from you soon!

Sincerely,

Charles Zhang