

# JIEKE WANG

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## EDUCATION

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**University of California San Diego**  
Bachelor of Mathematics  
Department of Mathematics

*Fall 2019 - Present*

## SKILLS / PROGRAMMING LANGUAGES

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Familiar with image classification and image retrieval algorithms.

Solid mathematics and statistics background.

Fluent in Java, Python (PyTorch), Mathematica

## INTERNSHIP

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July 2020 - August 2020: Internship as Strategy Programmer in Shengang Securities, Shanghai

## RESEARCH EXPERIENCE

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July 2018: high school summer program in MIT CSAIL

Project: aiming to design an **intelligent garbage bin that classifies empty garbage bins**

Challenges: garbage bottles may be distorted or broken; we want to distinguish empty bottles from bottles with liquid.

Process: we collect data using web crawler. Then we use SURF to extract features and BOVW model to save features for feature matching. The final robot was able to recognize 70% physical bottles.

## PROJECT

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- August 2020: **Person Re-Identification (ReID)**

Background: images are taken from different angles and different occasions

Process: We used transfer learning with a pretrained CNN (MobileNet-V2) on Market1501 dataset, initially getting accuracy of 50%. After blending label smoothing, the accuracy increases to 55%.

Finally, introducing semi-hard triplet loss improves the accuracy to 75%.

- December 2018: **Ranking List of Roller Coasters**

Background: problem from High School Mathematical Contest in Modeling (HiMCM) - we are given data of worldwide roller coasters and asked to build rankings of these roller coasters.

Process: We preprocessed data, then used entropy weights to select indicators, and TOPSIS to build the ranking list. We also discuss how to build user-friendly app and recommendation system to publish the rankings. Finally, our group was awarded Honorable Mention.

## EXTRA-CURRICULAR

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Stanford University MOOC 231N Convolutional Neural Networks for Visual Recognition

JulyEdu's Machine Learning Camp (including contents of Deep Learning)