

# Mengdi Xu (Mandy)

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## Education

**Bachelor of Science** University of Toronto, Toronto, Canada

Majors: Computer Science & Mathematics; Minor: Economics

Expected year of graduation: 2017; CS major gpa: 3.65/4.00 as of Fall 2016

## Relevant Courses

Computer Vision(100%), Algorithm Design(87%), Neural Networks(88%), Machine Learning(87%), Methods for Optimization(81%), Game Theory(97%), Time Series Analysis(84%), Graph Theory(82%), Database(82%)

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## Competitions

Competition: [Toronto Datathon](#)

TORONTO, CANADA

**Citadel & Citadel Securities & Correlation One**

Nov. 2016

- 1<sup>st</sup> place among 14 teams selected from over 500 students. Shared a prize of \$15,000 with teammates
- Analyzed hourly Bay Area Rapid Transit ridership data to understand how ridership relates to the broader trends of the city
- Predicted trend of population in San Francisco Bay Area by clustering and estimation of parameters of Gaussian process within 5 hours

Competition: "Wo+" Big Data Competition

SHANGHAI, CHINA

**Huawei & Shanghai Unicom**

Summer 2016

- Team leader of a group of three to complete two tasks. Placed 6<sup>th</sup> out of 768 participating teams, gained the offer to Shanghai Unicom Hatchery program
  - Analyzed data and proposed outdoor commercial proposals across four trading areas in Shanghai based on time and space data. Won "The Best Business Model" award
  - Predicted the likelihood for users to change phones in the first quarter of 2016. Achieved an accuracy of 80% on test set, which ranked the 4th place
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## Relevant Experiences

Teaching Assistant

TORONTO, CANADA

**University of Toronto**

Sept. 2016 – present

- CSC165: Mathematical Expression and Reasoning
- Led weekly tutorials and provided a good interpretation of solutions for 200 freshmen
- Contributed to the delivery of tutorials for groups of students
- Graded assignments and exams efficiently with less than 0.5% error rate

Research: Autonomous Driving

ONTARIO, CANADA

**University of Toronto**

Nov. 2016

- Used machine learning algorithms to highlight pixels that belong to roads in images
- Used computer vision techniques to detect cars, pedestrians, cyclists from stereo images and drew 3D bounding boxes around them

Machine Learning Research Internship

NANJING, CHINA

**AsiaInfo Smart Big Data Co., Ltd.**

Jul. 2016 – Aug. 2016

- Studied various pre-trained deep learning models and gave suggestions on pedestrian detection, counting and tracking in videos. Improved the model performance by 12% in the two months' internship
- Preprocessed data and discovered patterns and insights in unstructured data
- Prepared visualization for different models to find the optimal model

Research: Facial Expression Recognition

TORONTO, CANADA

**University of Toronto**

*Fall 2015*

- Designed and trained various machine learning models and improved them with multiple pre-processing methods such as PCA, mean-variance normalization, auto encoder
- Analyzed the performance of each model and optimized with ensemble strategies such as majority voting, ada boosting (came in 11<sup>th</sup> place out of 98)

Project: Itinerary Online Booking System

TORONTO, CANADA

**University of Toronto**

*Winter 2015*

- Led team of four students work under principles of Agile software development, using SVN as repository
- Designed and developed an Android application for a ticket-booking system

Software Engineer Internship

NANJING, CHINA

**Maitwang Co., Ltd.**

*Summer 2014*

- Improved the back-end of the membership system of a retail store using Java
- Wrote SQL scripts to test efficiency and executed performance tests to assess the new core membership system
- Learnt Agile development methodologies and extensively used Github version control
- Identified bugs and developed detailed records for future improvement

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## Other Experiences

Data Management Volunteer

NANJING, CHINA

**2014 Summer Youth Olympic Games**

*Summer 2014*

- Designed and developed a data management utility in Java that updates information without manual changes which saved employees 2 hours daily
- Provided departure and arrival information for over 200 officers from various countries daily and achieved error free during the whole period
- Received one of the two special recognitions for personal contributions from Azerbaijan officer

Co-founder & Vice-President of Human Resource

TORONTO, CANADA

**UTFAQ Student Club, University of Toronto**

*Since 2014*

- Advised associates and management on the interpretation of human resources policies, programs, and procedures
- Evaluated human resources practices and processes and recommended appropriate adjustments based on the progress of ongoing tasks
- Provides staffing support by executing recruiting efforts, screening candidates, selection of candidates for biannual recruitment

Participant of Summer Abroad Program

DUBAI, UAE

**Rotman School of Management, University of Toronto**

*May 2014*

- Selected as one of the 30 students to study in Dubai for an accounting and international management course
- Finished a compact study of a regular full-year commerce course in one month as the only non-commerce student
- Visited over 10 local companies, including oil drilling companies and Islamic banks, maintained good relationships and developed friendships with local representatives

First-Year Learning Community Program

TORONTO, CANADA

**University of Toronto**

*Sept. 2012 – Apr. 2013*

- Selected as one of the 23 participants in a first-year Actuarial Science studying group
- Participated in biweekly meetings and social networking events with professionals in Actuarial Science industry

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## Skills

**Programming:** MATLAB, Python, Java, R, SQL, XQuery, XML

**Operating System:** Linux, Windows