

# ZHUOYUE LYU

zhuoyue.lyu@mail.utoronto.ca | ZhuoyueLyu.github.io  
(647)685-4909 | Suit 1411, St.Mary Street, Toronto, Canada | M5S 0A6

## EDUCATION

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### University of Toronto (St. George)

Sep 2017 - Jun 2021

Second-year Computer Science Specialist - Focus in AI

Toronto, Canada

Major GPA: **3.94 / 4.00**

- **A+** CSC165 Mathematical Expression and Reasoning
- **A+** CSC236 Introduction to the Theory of Computation
- **A+** CSC258 Computer Organization (Hardware)
- **A** PHY151 Fundamental Physics
- **A** CSC207 Software Design
- (Current) Data Structure / Introduction to AI (Search & Reasoning)

## SKILLS/PROJECTS

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Skills:

- *Coding*: Python, Java, C, LaTeX, VB, CSS/HTML(Basic), Verilog
- *Tools*: GitHub, Linux/Unix, TensorFlow, Android Studio, SQL, CARLA (Basic)
- *Knowledge*: Machine Learning
- *Communicate*: English (Fluent), Chinese (Native), Polish (Basic)

Projects:

### Android Application Development (Java): [Tiles Game \(click\)](#)

Developing three separate Android games using SQL database and design patterns like MVC, Iterator and Observer.

### A game with AI strategies (Python): [Stonehenge/SubtractSquare Game \(click\)](#)

Using object-oriented programming techniques from the Python course with iterative/recursive/minimax AI strategies.

### Machine Learning Models (Python): [ML \(click\)](#)

Creating 5 machine learning modes (like KNN, decision tree) follow the online learning source

### Personal Website (Html): [zhuoyuelyu.github.io](http://zhuoyuelyu.github.io) (click)

Designing independently using HTML

## RESEARCH EXPERIENCE

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## Chinese Academy of Sciences

Research Assistant in, ADAS simulation team, Institute of Software

Aug 2018 - Sep 2018

Beijing, China

[link \(click\)](#)

- Generated **11,600** deteriorated images of street signs
- Using Python and **TensorFlow** to retrain the last layer of the **Google Inception V3** artificial neural network
- **Machine learning**: trained the model for 3000 steps, got a classifier with **90+%** precision
- Analyzed the data and tried to find the relationship between **deterioration rate** and identifying accuracy

\*CAS is the national academy for the natural sciences of the People's Republic of China. Which is the world's largest research organization, comprising around 60,000 researchers working in 114 institutes.

## LEADERSHIP EXPERIENCE

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### AIESEC Poland

Volunteer, Quality Education

May 2018 - Jun 2018

Katowice, Poland

- **Led a team of 11**, presented Chinese culture during the "Global Village" activity in Katowice
- Conducted culture-sharing lessons for **6 weeks**, with **600+ students** from 2 schools, ranging from kindergarten to grade 11 in Bielsko-Biala and Dobieszowice ([facebook link](#))
- Arranged **interactive activities**: Chinese Papercutting, Traditional Chinese songs with **36 students** who had mental disabilities, and can not speak English

\* AIESEC is an international NGO that provides young people with leadership development, cross-cultural global internships, and volunteer exchange experiences across the globe.

## MISCELLANEOUS

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### Interests:

- *Singing*: National Singing Certificate, level 5
- *Saxophone*: National Saxophone/Piano Certificate, level 2
- *Photography*: Third prize in 2015 Zhejiang Province Photography Competition
- *Radio/Stage host*: **Vice-president** of the School's radio station, (2013-2016)

### Awards/Honors:

- **1st place** in "就要大声说" 2017 UofT Chinese Speech Contest (Nov 2017)
- **2nd prize** in Chinese Mathematical Olympiad, Zhejiang Province (Mar 2016)
- **Outstanding Student** (优秀共青团员) of Zhejiang Province (Jun 2015)
- **President** of the Hangzhou City Arts Festival Student Organizing Committee(2014)



Won **1st place** in "就要大声说" 2017 UofT Chinese Speech Contest (Nov 2017)



Went to Poland as a volunteer, shared Chinese Culture (May 2018 – Jun 2018)