

# ZIYUE YANG

COMPUTER SCIENCE AND STATISTICS, UNIVERSITY OF TORONTO

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<https://zyang.dev>

## TECHNICAL SKILLS

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**Programming** Python · Java · C++ · SQL · JavaScript · Swift  
**Web Tech** Django · React · Django-REST · Rails · MongoDB  
**Data Science** R · Pandas · TensorFlow · Scikit-learn · Keras  
**Other** Scrum · Git · AWS · Jekyll · Android · iOS

## EXPERIENCE

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### Bigtheta

Project Lead (Remote)

Toronto, ON (May 2020 - June 2020)

- Led upcoming second-year students with computer science backgrounds to create a Django-based project.
- Presented introductory software development tools and design principles (e.g. OOP programming principles).
- Demonstrated full-stack development process: front-end and back-end development; SQLite data querying.

### Cohesion

iOS Developer Intern

Guangzhou, Guangdong, China (Summer 2018)

- Contributed to the Swift development of Cohesion's iOS app, an office reservation tool.
- Implemented React Native-based front-end features for mobile.
- Front-end testing using the Jest framework.

## TECHNICAL PROJECTS

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### UniMart

<https://github.com/yangzi33/unimart>

Web market based on the [Django REST framework](#), providing students a platform to trade items online.

- Implemented models, views, and templates to allow user registration, account profiling, and item listing.
- Styled front-end templates using Bootstrap and React.
- Queried application data with SQLite.

### Agenda

<https://github.com/yangzi33/agenda>

Android calendar app built using Java. Agenda allows users to create and search calendar events with reminders.

- Integrated Android GUI based on open-source APIs.
- Created features that allow users to add, modify, and create repeating events with specific frequencies.
- Implemented simple SQLite relational databases for data querying, to allow multiple users.

### House Prices Prediction with Gradient Boost Classifier

<https://kaggle.com/yangzi33/housepriceprediction>

Top 39% machine learning model for competition [House Prices: Advanced Regression Techniques](#).

- Built house prices prediction model using the gradient boosting technique with hyperparameters optimized based on randomized searching algorithms.
- Demonstrated machine learning methods including principal component analysis, feature engineering, and Lasso.

### 3D Navigator

<https://github.com/yangzi33/ConsoleFPV>

Dynamic first-person 3D navigator rendered in command line.

- Implemented a ray casting algorithm in C++, mapping from 2D space to 3D.

### Treemap

<https://github.com/yangzi33/Treemap-Visualizer>

File size visualizer implemented using a recursive treemap algorithm, tested with framework *unittest*.

## EDUCATION

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### University of Toronto

2018 - 2022

Toronto, ON, Canada

- Honours Bachelor of Science, Computer Science and Statistics.
- **Coursework:** (Enriched) Data Structures and Analysis, (Enriched) Theory of Computation, Software Design, Systems Programming, Computer Organization, Relational Database, Machine Learning Methods, Optimization.

## AWARDS & EXTRACURRICULAR

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### Recognized Group Leader

*Enriched Data Structures and Analysis, University of Toronto*

### LearnAI Associate

*Artificial Intelligence Group, University of Toronto*

### Orientation Leader

*Computer Science Student Union, University of Toronto*

### 2018 Scholarship Recipient

*\$2,000, University of Toronto President's Scholarship Program*

**Courseworks:** courses that I have completed a significant portion of and enjoyed much.

- Cloud Practitioner Essentials: Official AWS training modules. Scheduled to obtain a certification in December.
- [Machine Learning, Stanford University](#): Course that builds a solid foundation of my skills in machine learning.
- [Convolutional Neural Networks for Visual Recognition, Stanford University](#).