

# Yuchen Wang

Passionate machine learning engineer and researcher striving to solve real-world or challenging problems. Researching at Vector Institute focusing on auto-tuning algorithms.

## LINKS

WebSite: <http://yuchenwyc.com>  
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 Github:// [yuchenWYC](#)  
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## AWARDS

(May 20) **UofT Excellence Award** \$6,000  
*Awarded to about three students each year.*  
 (Dec 19) **The Dorothy Walters Scholarship** \$600  
*Awarded to top 18 students in Woodsworth College.*  
 (All years) **Dean's List Scholar**

## COURSEWORK

### Graduate

Computer Graphics (A+)  
 Computer Networks (A+)  
 Stochastic Processes (A+)  
 Methods of Data Analysis I (A+)  
 Probabilistic Learning and Reasoning (A+)  
 Neural Networks and Deep Learning (A+)

### Undergraduate

Computer Organization (A+)  
 Data Structures and Analysis (A+)  
 Algorithm Design and Analysis (A+)  
 Operating Systems (A)  
 Real Analysis (A)  
 Vector Calculus (A+)  
 Linear Algebra II (A+)  
 Probability I (A)  
 Nonlinear Optimization (A+)  
 Introduction to Machine Learning (A+)  
 Effective Writing

## SKILLS

### Specialized

Python • C • R • Bash •  $\text{\LaTeX}$  • Git

### Familiar

Android • Java • C++ • HTML & CSS • Julia  
 MatLab • MySQL

### Machine Learning Libraries

NumPy • PyTorch • Pandas • Autograd  
 Matplotlib • ggplot2 • SciPy • Scikit-learn  
 Seaborn

## EDUCATION

### University of Toronto | SEP 2017 - JUNE 2020 (EXPECTED)

Honours Bachelor of Science in Computer Science, Statistics & Mathematics  
 cGPA: 4.00/4.00, Course Average: 92%

## WORK EXPERIENCE

### University of Toronto | TEACHING ASSISTANT

Jan 2021 (Expected) - April 2021 (Expected)  
 Marking assignments, holding office hours and leading tutorials in the course *Software Tools and Systems Programming*.

### Vector Institute | MACHINE LEARNING RESEARCHER

April 2020 - Present | Supervisor: Roger Grosse  
 Designing hypernetwork algorithms to auto-tune hyperparameters of Artificial Neural Networks during a single run.

### University Health Network | MACHINE LEARNING RESEARCHER

May - Dec 2019 | Supervisor: Bo Wang  
 Designed a data processing pipeline and engineered a sequential Artificial Neural Networks model that accurately predicts 1-year outlook cause of death of post-organ-transplant patients with  $\sim 0.8$  auc, 2-year and 5-year outlook cause of death with  $\sim 0.7$  auc.

### DHC Software Co. Ltd | WEB DEVELOPMENT INTERN

May - July 2018 | Xi'an, Shannxi, China  
 Engineered in the Oracle database for *Office Automation system for Shannxi Yanchang Petroluem* using SQL queries and consulted with customers to report defects in the system.

## PROJECTS

### Project X Research Competition | SEP - NOV 2020

Led the UofT team to develop a new neural ordinary differential equation architecture that learns the dynamics of time series with multiple predictors (paper in review). [[ArXiv preprint](#)]

### ASA Datafest 2020 | JUNE 2020

Led a student group to classify sentiment on Twitter using deep learning models, then explored how the U.S. general public responds to breaking news in the COVID-19 pandemic. (Honourable mentions)

### Mars Game Platform | JAN. 2019 - MARCH 2019

An open-source Game Platform that contains three games and a database in cloud that stores user accounts & scores.  
 Implemented games Sliding Tiles and Sudoku. Produced UI designs in Android. Created tests and documentations.