

# Liu, Zhenyuan/Desmond

☎ (+852) 61505275 · ✉ zyliu8 at cse.cuhk.edu.hk · 🌐 github/desmondlyz  
👤 www.cse.cuhk.edu.hk/~zyliu8

## Education

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**The Chinese University of Hong Kong** 2017 – 2021  
BSc. in Computer Science. Major GPA: 3.96

**University of Toronto** 2020.01 - 2020.04  
Exchange Program

## Research Experience

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**Analyzing Motions and Stiffness of the Multi-Joint Assemblies** 2020.07 - Present

- Joint first author of a paper to be submitted to SIGGRAPH 2021.
- Advisor: Prof. Fu Chi Wing, CUHK
- Model an assembly structure using rigidity matrix and via its eigenvalue to predict motions and optimize structural stability.

**Slicing Neural Networks Using SVM** 2020.06 - 2020.09

- Advisor: Prof. Anand Sarwate, Rutgers University
- Funded by Professor Charles K. Kao Research Scholarship
- Use SVM in the middle of gigantic neural nets to save computation and network communication cost in remote settings.

**Generating Adversarial Examples in Text Classification** 2019.06 - 2019.09

- Advisor: Prof. Michael R. Lyu, CUHK
- Faculty 2019 Summer Research *Best Project Award*
- Attack state-of-the-art text classifiers (mainly neural nets) via white-box and black-box methods.

## Side Project

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**TimeWalk: A Cross-platform Coding Metrics Tracker** 2020

- Track coding metrics with respect to different languages and text editors.
- The core, written in Python, is designed to be extensible for customized metrics with a plugin system
- Visual Studio Code plugin available on VS marketplace and IntelliJ plugin in progress.

## Awards and Honors

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Arthur and Louise May Memorial Scholarship 2020

Professor Charles K. Kao Research Exchange Scholarship 2020

Outstanding Academic Performance Scholarship, Dept. of CSE 2018-19

Outstanding Academic Performance Scholarship, Dept. of CSE 2019-20

ELITE Stream Scholarship, Fac. of Engineering 2017-18

ELITE Stream Scholarship, Fac. of Engineering 2018-19

Dean's List, Fac. of Engineering 2018,19,20

Shaw College Exchange Scholarship 2018-19

## Professional Skills

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### Programming languages:

- Proficient in: Python, C/C++
- Familiar with: Go, Java, JavaScript, TypeScript, Clojure, HTML/CSS, Dart, R

### Frameworks:

- Machine Learning: TensorFlow, PyTorch, scikit-learn
- Web/Mobile/Desktop Development: Vue, Flutter, React Native, Electron
- Cloud: AWS, Hadoop