Liu, Zhenyuan/Desmond

📞 (+xxx) xxxxxxxx · ✉ zyliu@link.cuhk.edu.hk · ⌂ github/desmondlzy
👤 desmondlzy.github.io

Updated on Dec. 29, 2020

Education

The Chinese University of Hong Kong   2017.08 – 2021.07
BSc. in Computer Science. Major GPA: 3.xx

University of Toronto   2020.01 - 2020.04
Exchange Program

Research Experience

Analyzing Motions and Stiffness of the Multi-Joint Assemblies   2020.07 - Present
- Advisor: Prof. Fu Chi-Wing, CUHK
- We aim to submit this work to SIGGRAPH 2021. I will be one of the co-first authors.
- Model an assembly structure with different mechanical joints, using the idea of rigidity matrix and formulate an optimization problem. Then solve it to predict free motions, measure and optimize structural stability of the assembly structure.

Saving Computation by Slicing Neural Networks Using SVM   2020.06 - 2020.09
- Advisor: Prof. Anand Sarwate, Rutgers University
- Funded by Professor Charles K. Kao Research Scholarship
- Collect intermediate data in the middle layers of neural networks and use SVM to do binary classification for early stopping during inference time and thus save computation

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, then compare and analyze the results of different attack strategies.

Side Project

TimeWalk: A Cross-platform Coding Metrics Tracker   2020
- Help developers track coding metrics with respect to different languages and text editors.
- Support customized metrics via an integrated plugin system
- Visual Studio Code plugin available on VS marketplace and IntelliJ plugin in progress.

Awards and Honors

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

Professional Skills

- Proficient in programming languages: Python, C/C++
- Familiar with programming languages: Go, Java, JavaScript, TypeScript, Clojure, HTML/CSS, Dart, R
- Scientific Computing and Learning: Eigen, TensorFlow, PyTorch, scikit-learn
- Web/Mobile/Desktop Development: Vue, Flutter, React Native, Electron
- Cloud: AWS, Hadoop