

Aidan Yang

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EDUCATION

- **Queen's University** Kingston, Ontario
Bachelor of Applied Science, Computer Engineering and Mathematics *Expected graduation: 2021 June*
 - Thesis: modeling the loss function of generative adversarial networks (GANs) with Rényi information measures

RESEARCH

- **Carnegie Mellon University** Pittsburgh, PA
Undergraduate Researcher (REUSE). Advisors: Ruben Martins and Claire Le Goues *Summer 2020*
 - Built a program synthesis pipeline for refactoring data-science APIs (e.g., Tensorflow, Pytorch, Dplyr)
 - Generated satisfiability modulo theories (SMT) constraints using error message hyponym patterns
 - In-submission full, technical track conference paper to ICSE-2021
- **Queen's University** Kingston, ON
Undergraduate Researcher. Advisors: Ying Zou and Ahmed E. Hassan *May 2019 - May 2020*
 - Investigated mobile development release documentation
 - Performed a novel empirical study on 69,851 releases and 67.7 million user reviews for 2,232 apps
 - In-submission EMSE journal paper as first author
- **Queen's University** Kingston, ON
Undergraduate Researcher. Advisors: Daniel Alencar da Costa and Ying Zou *May 2018 - May 2019*
 - Investigated the co-evolution of documentation and source code in Behavior Driven Development
 - Applied reinforcement learning techniques to model repository behavior from 133 open-source projects
 - Built NLP models to establish links between evolving software artifacts achieving 79.8% accuracy
 - Accepted full, technical track conference paper at MSR-2019 as first author

INDUSTRY

- **AMD** Markham, ON
Software Developer (Display Abstraction Layer) *Sept 2019 - May 2020*
 - Developed High Dynamic Range (HDR) and Freesync features for GPU drivers
- **Queen's Technology and Media Association** Kingston, ON
Android Developer *Sept 2018 - May 2019*
 - Built an Android AR application that places rendered furniture in rooms
 - App (LucyAR) published on the Google Play Store on March 18th 2019
- **GF Securities** Guangzhou, China
Investment Banking Analyst *Summer 2017*
 - Advised initial public offering (IPO) transitions for clients of the industrial group

PUBLICATIONS

- **SOAR: Synthesis for Open-Source API Refactoring**
Aidan Z.H. Yang
ACM SIGPLAN International Conference on Systems, Programming, Languages, and Applications: Software for Humanity (SPLASH Companion), 2020
- **Predicting Co-Changes between Functionality Specifications and Source Code in Behavior Driven Development**
Aidan Z.H. Yang, Daniel Alencar da Costa, Ying Zou
IEEE/ACM 16th International Conference on Mining Software Repositories (MSR), 2019

PUBLICATIONS IN-SUBMISSION

- **SOAR: A Synthesis Approach for Data Science API Refactoring**
Ansong Ni, Daniel Ramos, Aidan Z.H. Yang, Ines Lynce, Vasco Manquinho, Ruben Martins, Claire Le Goues
In-submission at ICSE-2021
- **An Empirical Study on Release Notes Patterns of Popular Apps in the Google Play Store**
Aidan Z.H. Yang, Safwat Hassan, Ying Zou, Ahmed E. Hassan
Under review at Empirical Software Engineering Journal (EMSE)

TEACHING

- **Queen's University** Kingston, ON
TA for Data Structures and Algorithms under Ying Zou Winter 2018

AWARDS

- SIGSOFT CAPS Student Travel Award for ICSE 2019
- Alberta Alexander Rutherford Scholarship (\$2000 per year for first two years of university)
- 1 of 9 finalists for Alberta Pianofest Society 2016 (international award)
- 4th place Canadian Music Competition 2015 (national award)

PROGRAMMING SKILLS

- **Languages:** Python, R, SQL, C/C++
- **Technologies:** Python PANDAS and Numpy, TensorFlow, PyTorch, R, PostgreSQL, WinDBG