

Aidan Z.H. Yang

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EDUCATION

- **Queen's University** Kingston, Ontario
Bachelor of Applied Science, Computer Engineering and Mathematics Expected graduation: 2021 June

RESEARCH

- **Carnegie Mellon University** Pittsburgh, PA
Visiting Undergraduate Researcher (REUSE). Advisors: Ruben Martins and Claire Le Goues Summer 2020
 - Built a program synthesis pipeline for refactoring deep learning APIs
 - Customized 6 lexico-syntactic patterns for deep learning domain specific error messages
 - Generated satisfiability modulo theories (SMT) constraints using error message hyponym patterns
 - In-submission full, technical track conference paper at 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
 - Built unsupervised learning algorithms to group 69,851 app updates into 6 patterns based on release note behavior
 - 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 3 reinforcement learning techniques to model code repository behavior from 133 open-source projects
 - Trained a novel NLP algorithm to establish links between evolving artifacts achieving 79.8% accuracy
 - Accepted full, technical track conference paper at MSR-2019 as first author

INDUSTRY

- **AMD** Markham, ON
Software Developer Sept 2019 - May 2020
 - Developed and debugged High Dynamic Range (HDR) and Freesync features
 - Kernel mode debugging on Windows OS using WinDBG and C++
- **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
 - Researched and audited client investments using financial models

TEACHING

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

PUBLICATIONS

- 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
Empirical Software Engineering Journal (EMSE), 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
The 43rd International Conference on Software Engineering (ICSE), in-submission
- SOAR: A Synthesis Approach for Data Science API Refactoring
Aidan Z.H. Yang
Systems, Programming, Languages, and Applications: Software for Humanity (SPLASH) 2020 Student Research Competition
- Predicting Co-Changes between Functionality Specifications and Source Code in Behavior Driven Development
Aidan Z.H. Yang, Daniel Alencar da Costa, Ying Zou
The 16th International Conference on Mining Software Repositories

AWARDS

- SIGSOFT CAPS Student Travel Award for ICSE 2019
- Alberta Alexander Rutherford Scholarship (\$2000 per semester 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 dplyr and ggplot2, PostgreSQL, WinDBG