Aidan Z.H. Yang

a.yang@queensu.ca https://aidanby.github.io/

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
- 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 — *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

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
  In-submission to Empirical Software Engineering Journal (EMSE)

- 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 to ICSE-2021

- SOAR: Synthesis for Open-Source API Refactoring
  Aidan Z.H. Yang
  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
  The 16th International Conference on Mining Software Repositories (MSR 2019)

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