HEATHER D'SOUZA

📞 647-802-8220
🔗 heatherkd
🔗 heathkd
🖥 heathkd.github.io
✉ hkdsouza@uwaterloo.ca

SUMMARY OF QUALIFICATIONS

- **Languages:** Swift, Objective-C, Python, Java, C++
- **Tools:** Xcode, UIKit, CocoaPods, Git, Postman, Charles, Realm, Jira, Confluence, UXPin
- Strong understanding of data structures and algorithms, OOP, and SDLC
- Software development experience in mobile app development, image processing, and web

WORK EXPERIENCE

Agile iOS Software Engineer, TribalScale, September 2018 - December 2018
- Developed an iOS radio app with **800,000** monthly users in **Swift** for playing stations and podcasts
- Added functionality to a media playback SDK in **Objective-C** to include a buffer to pause live stations, **AVQueuePlayer** to cache songs, and view controller logic for displaying interstitial ads
- Created modules to display recently, subscribed to, and downloaded podcasts stored in **Realm**
- Integrated an on-demand playback service by abstracting authentication, API calls, and skips
- Employed **XP** methodologies through paired programming, **TDD**, architecture reviews, iteration planning meetings, retros, and release candidates to execute faster release cycles

Bioinformatics Programmer, Ontario Institute for Cancer Research (OICR), January 2018 - April 2018
- Created XenoClassify, an open-source command-line tool, in **Python** that classifies sequencing data from large xenograft samples (100 GB+) with **96%** accuracy
- Integrated the tool into a data processing workflow using **Java** and performed integration tests with **Jenkins** to streamline job submissions on OICR's high performance cluster
- Scripted in **Python**, **Perl**, and **Bash** to process and analyze sequencing data

Software Developer, Sick Kids, May 2017 - August 2017
- Developed cell tracking software that measures changes in eccentricity, nuclear area, and orientation to track the movement of cells in a time-course
- Used image processing to add mitosis detection and tracking visualization features with **Matlab**

PROJECTS

PharmaFriend, Azure, APIs, Hack the North 2017
- Developed a chat-bot android app that prevents users from purchasing medication detrimental to their drug plan and health
- Accessed drug data from **REST APIs** to assess the risks of the medication
- Developed a language-understanding model using **Microsoft Azure** to train the chat-bot to recognize and respond to various social cues

Twitalytics, Python, ReactJS, Hack Western 2018
- Created a web app that extracts tweets from the **Twitter Search API**, performs sentiment analysis, and visualizes the public opinion of any given search query
- Developed an NLP algorithm using **NLTK** that clusters and prioritizes popular tweets
- Composed graphs of the data using **ReactVis**
- Won "Best Use of Entity Extraction" category

EDUCATION AND ACHIEVEMENTS

- Candidate for Bachelor of Applied Science, Biomedical Engineering, University of Waterloo, 2021
- President's Scholarship of Distinction ($2000), University of Waterloo, 2016
- Publication: Ginzberg M.B., Chang N., **D'Souza H.**, Kirschner M.W., Kafri R., "Cell size sensing in animal cells coordinates anabolic growth rates and cell cycle progression to maintain cell size uniformity", *eLife,* 2018