



# HEATHER D'SOUZA

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 heatherkd

 heathkd

 heathkd.github.io

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## SUMMARY OF QUALIFICATIONS

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- **Languages:** Java, Swift, Python
- **Tools:** Git, Bitbucket, CircleCI, Xcode, IntelliJ, Gradle, Postman, Realm, Firebase, Jira, Docker, AWS ECS
- Software development experience in tracing, mobile app development, image processing, and web

## WORK EXPERIENCE

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### Software Engineer, Datadog, January 2020 - April 2020 *New York City*

- Developed **three ByteBuddy**-enabled integrations (for Spring task scheduling, the Grizzly async HTTP client, and the Grizzly filter-chain server) that send traces to Datadog via the **Java** tracer
- Transformed an internal tool used to study the performance of the tracer to send **JVM** metrics to Datadog via the **Statsd** protocol, run from a **CLI**, and use **Gradle** to facilitate dependency injection
- Identified the process for enabling trace collection in a **Docker** container living on an **Amazon EC2** instance and wrote customer-facing documentation summarizing the set-up procedure

### Software Engineer, Splunk, May 2019 - August 2019 *San Francisco*

- Built an iOS security operations app that automates tasks with **Swift** and **VIPER** architecture
- Implemented a UI-rendering feature that uses the factory design pattern, **Codable**, and dynamic data to create and populate card components, dynamic forms, and action buttons at runtime
- Reduced response payloads by **83%** and minimized the number of API requests made to the server
- Created view and control UI components for an internal library similar to **SwiftUI**

### iOS Software Engineer, TribalScale, September 2018 - December 2018 *Toronto*

- 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 released, subscribed, and downloaded podcasts stored in **Realm**
- Employed **XP** methodologies through paired programming, **TDD**, and architecture reviews

### Bioinformatics Programmer, Ontario Institute for Cancer Research, January 2018 - April 2018 *Toronto*

- 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, SickKids, May 2017 - August 2017 *Toronto*

- Developed cell tracking software in **Matlab** that uses image processing to detect mitosis and measures changes in eccentricity, nuclear area, and orientation

## EDUCATION AND ACHIEVEMENTS

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- 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