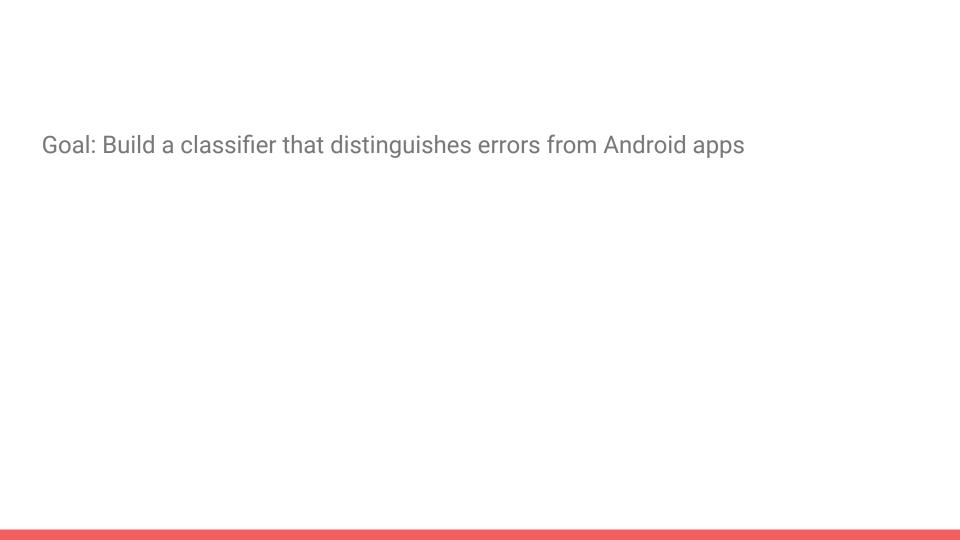
Sprint1

Hong Xin



Goal: Build a classifier that distinguishes errors from Android apps Users: Engineers can use this tool to exam their codes without running them Users: Engineers can use this tool to exam their codes without running them

Goal: Build a classifier that distinguishes errors from Android apps

Build an Android app

Kotlin and Android Studio

- 1. Build an Android app
- a. Kotlin and Android Studio
- 2. Implement existing static Android app analyzers
 - a. Detekt

- 1. Build an Android app
 - a. Kotlin and Android Studio
- 2. Implement existing static Android app analyzers
 - a. Detekt
- 3. Extract feature vectors from good and bad Android Apps

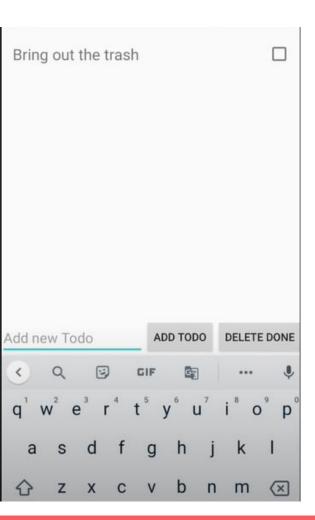
- 1. Build an Android app
 - a. Kotlin and Android Studio
- 2. Implement existing static Android app analyzers
 - a. Detekt
- 3. Extract feature vectors from good and bad Android Apps
- 4. Extra log files from good and bad Android Apps
 - a. Drain3

- 1. Build an Android app
 - a. Kotlin and Android Studio
- 2. Implement existing static Android app analyzers
 - a. Detekt
- 3. Extract feature vectors from good and bad Android Apps
- 4. Extra log files from good and bad Android Apps
 - a. Drain3
- 5. Train a machine learning classifier

- 1. Build an Android app
 - a. Kotlin and Android Studio
- 2. Implement existing static Android app analyzers
 - a. Detekt
- 3. Extract feature vectors from good and bad Android Apps
- 4. Extra log files from good and bad Android Apps
 - a. Drain3
- 5. Train a machine learning classifier
- 6. Evaluate the performance

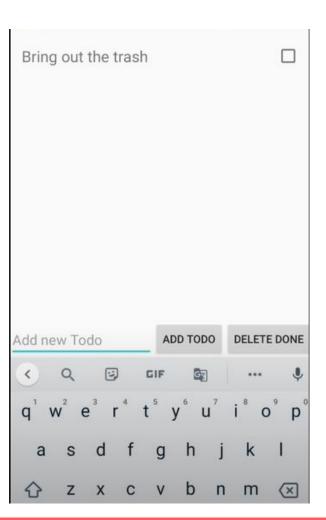
Android App

1. To-Do list



Android App

- 1. To-Do list
- 2. User can ...
 - a. Add new ToDo
 - b. Cross out ToDo
 - c. Delete ToDo



Kotlin

- 1. A cross-platform, statically typed, general-purpose programming language with type inference
- 2. Kotlin interoperates fully with Java

Android Studio

The official integrated development environment for Google's Android operating system

Detekt

- 1. A static analysis tool for the Kotlin programming language
 - a. analyze Kotlin code with multiple rule sets
 - b. flag the code that breaks any of its rules

Detekt

- 1. A static analysis tool for the Kotlin programming language
 - a. analyze Kotlin code with multiple rule sets
 - b. flag the code that breaks any of its rules
- 2. Complexity reports based on...
 - a. lines of code
 - b. complexity of the programand
 - c. amount of code smells

Drain3

- 1. Open source log processing tool
- 2. Creates a balanced tree-like structure
 - a. each leaf is based on the length of a log

Questions?