

# Bruinmon



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# Introduction

## Motivation:

- Similar to Pokemon Go
- Incentive for UCLA students to explore the campus and meet other students
- Build an app that uses wireless technologies such as GPS and Bluetooth to discover and utilize their capabilities

## Functionalities:

- Interactive game simulating a mix of pokemon battle tactics with rock-paper-scissors style moves
- Collect a variety of “Bruinmon” in different locations
- Battle other players using bluetooth or AI locally



# Technologies

- Bluetooth:
  - used to connect to another player and battle them using their own Bruinmon
- GPS:
  - used to track the user's location so that the user can be located and detect nearby Bruinmon
- Database synchronization:
  - data persists after closing app and syncs with db



# Implementation

Initially launches the landing page and using the Android services location API, the app requests the last known location of the user's device.

- Nearby Bruinmon can be seen and captured
- Navigate to your owned Bruinmon, your Bruindex, and Battle pages.
- An 802.11 WLAN or 4G/LTE connection must be maintained for GPS services to work



## Implementation (cont.)

To battle, you must pair one device to the other through settings on each phone. Then, one phone acts as the server (Master), while the other acts as the client (Slave node).

- The Master is the phone that receives a connection/battle request from another player (Client)
- The Master opens a `BluetoothServerSocket` and listens for incoming connections, then provides a `BluetoothSocket`
- The connection is RFCOMM based and only allows one connected client per channel



## Implementation (cont.)

An SQLite database was implemented to keep track of all persistent Bruinmon info, such as Name, Type, Moves, and Location.

- There is a Bruinmon DB table that contains all of the captured Bruinmon. These tables holds all of it's necessary info, with each column holding a value associated with the specific Bruinmon. (i.e. Type, Location, and the associated image of the Bruinmon)
- There is a moves DB table that contains all of the moves



# Challenges

- None of us had prior Android Studio experience
- Some of us had no prior Android or Java development
- Bluetooth involved more than just pairing devices to communicate the necessary data

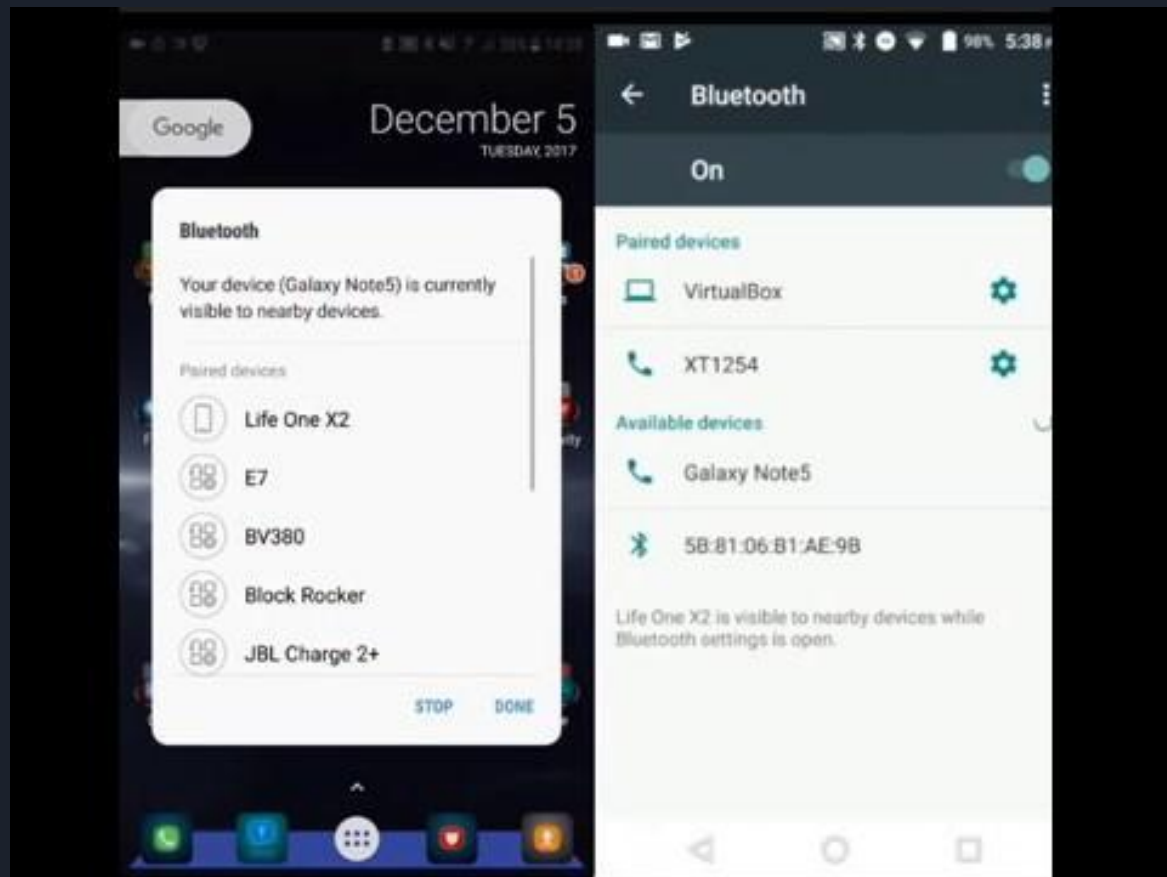


# Results

- Can battle other players using your own captured Bruinmon via Bluetooth
- Can find various Bruinmon at different locations (Pauley, Wooden Center, Rose Bowl)
- Can battle AI with your own Bruinmon when no one wants to play with you



# Demo





# Member Contribution

Brandon Haffen - Creation of game engine/GUI. In charge of the battle system, including user interface, damage balancing, and Bruinmon types with their advantages/disadvantages.

Uday Alla - Creating Database so that caught Bruinmon persist in a User's inventory even after app is closed.

Nicholas Turk - Bluetooth Implementation so that 2 users can discover and battle each other on campus.

Trey Crossley - Implementing Android Services API to find User location and discover different Bruinmon strewn about campus.



Questions?