WikiWalks – Vision

# Introduction

WikiWalks is a project to be developed by a three-person team (previously four). There are no external sponsors. The project aims to solve the problem of bushwalkers having unreliable or even no proper path maps, which can lead to getting lost in potentially dangerous areas, by creating an Android app that displays crowdsourced paths on a map for easy navigation and path discovery.

# Positioning

## Problem Statement

The problem of poor and unreliable bush path maps affects bushwalkers and emergency services. This can lead to getting lost in a potentially dangerous area, not being able to navigate paths, or just being unaware of paths in your area. A successful solution would be an app to crowdsource and display all paths in a person’s area, with extra info such as ratings and warnings.

## Product Position Statement

For bushwalkers and emergency services who want to discover paths and have reliable, up-to-date path info, the WikiWalks project is an Android app that will crowdsource paths and overlay them onto a map with information such as reviews, statistics, and points of interest, along with important info like accessibility warnings. Unlike other bush path apps such as Wikiloc and AllTrails, WikiWalks will focus on quickly and simplistically delivering information in an extremely lightweight app suitable for all phones without any bloat or unnecessary collection of personal data. Unlike others, there will be no accounts or in-app purchases, it will be completely free and anonymous while still striving to retain feature parity.

# Stakeholders

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| Name | Description | Responsibilities |
| WikiWalks developers | The development team behind the app | Project planning  App development  Ensuring all functions are implemented  Maintaining the database  Testing the app before release |
| Bushwalkers | The primary target userbase for the project | Using the app to find paths in their area  Recording paths to add to the database  Providing feedback on the app  User acceptance testing |
| Emergency services | Another potential userbase for the project | Using the app to quickly and safely navigate paths  Providing feedback on the app |

## User Environment

There are three people working to complete the project, originally four, and this is unlikely to change again throughout the development period. Task cycles will be a fortnight in length, and may be amended to include more tasks if completed early. The project will need to be focused on the context of outdoor usage, as well as keeping the constraints of a mobile platform and reliance on cellular data in mind, particularly the problem of potentially slow, spotty, or even non-existent connections in some areas.

The front-end app will not be using or integrating with any other applications outside of the Google Maps API and the Android OS, however the back-end will be using Nginx on Ubuntu to host the server, which the server will need to integrate with. The back-end will also be using the Flask framework for Python, and will integrate with its features. These were chosen as they are easy to use, widely documented, and support all our needs. Between the team, there is experience with all languages and frameworks involved.

There will be 2 major tasks as part of development. The back-end, which will be developed first, and the front-end, which will be developed second as it requires the back-end to be functional.

# Product Overview - Needs & Features

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| --- | --- | --- | --- |
| Need | Priority | Features | Planned Release |
| A way to host paths | 1 | Host scalable SQL database containing paths and points of interests with their attributes  Allow submissions from the app  Verify submissions are in the correct format  Be able to handle multiple requests at once | End of 2020 |
| Software to use the paths | 2 | Pull maps from Google Maps  Pull paths and points of interest from database  Display paths on the map  Record paths  Rate and report paths  Schedule group walks  Cache paths offline | End of 2020 |

# Other Product Requirements

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| --- | --- |
| Requirement | Priority |
| Performance – the back-end needs to be quick, and the front-end needs to run smoothly on all devices | 1 |
| Scalability – the server needs to be able to handle having many paths and many users | 2 |
| Backup – in case there is data corruption, backups are important | 3 |
| Ease of use – the app should be simple and easy to navigate | 4 |
| Reliability – the server should have as little downtime as possible, and the app should retain basic capabilities when there is no server access | 5 |
| Privacy – the app and server should collect as little information as possible about users | 6 |