**Individual plan**

**PROJECT INFORMATION**

**Project title:** Hardened Registration on Mobile Crowdsourcing

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**Date:**

**Keywords:** Mobile crowdsourcing, Android Root, Emulator detection, Sybil hunting

**BACKGROUND & OBJECTIVE**

It’s hard for 10-years-ago us to imagine how capable mobile devices are in 2021. Nowadays, mobile devices are totally like portable PC or smaller laptop with strong and powerful micro processors. These developments in mobile devices help bring Mobile CrowdSourcing into life.

Mobile CrowdSourcing takes the advantage of sensing ability of mobile devices, gathering surroundings noise, humidity, etc., and helps us know where we live better. The most well-known practice of Mobile CrowdSourcing is a map app. Based on users’ location info, a map app can help design routes which would cost less time or less money for users.

However, the openness of such system also brings in hazards. In the previous case, if some malicious users try to inject fake information, a map app may falsely believe there is a traffic jam happened while there is barely no car on the street. There are some existing technologies help detect false data in the database but it’s inevitable that the database has been corrupted already.

This project aims at designing a hardened registration system which help eliminate those potential malicious devices or emulators at the very beginning and keep the data pool clean and accountable.

**RESEARCH QUESTION & METHOD**

QUESTION: State the question that will be examined. Formulate is as an explicit and evaluable question. State your hypothesis.

Objectives: Break down the research questions to measurable objectives.

Tasks: Describe the tasks that are necessary to reach the objectives. For each task, describe the challenges it involves.

Method: Describe the method/s that will be followed. Explain why they are appropriate for the project or for the specific tasks.

Ethics and Sustainability: Does the project address questions of ethics or sustainability? Does the project raise ethical or sustainability questions? If yes, how could these be handled?

Limitations: Define the limitations on what is to be done (so that it is clear what is not included in the degree project).

Risks: Explain what can go wrong and delay or make the project impossible to conclude. Explain how you will deal with these problems.

**EVALUATION & NEWS VALUE**

Evaluation: How is it determined if the objectives of the degree project have been fulfilled and if the research question has been adequately answered? What kind of qualitative or quantitative measures can be defined and evaluated?

Expected scientific results: How is the work scientifically relevant?

The work's innovation/news value. Why does someone want to read the finished work? And who are these people?

**PRE-STUDY**

Description of the literature studies. What areas will the literature study focus on? How shall the necessary knowledge on background and state-of-the-art be obtained? What preliminarily important references have been identified?

**CONDITIONS & SCHEDULE**

List of the resources are needed to solve the problem. This can be technical equipment, software, or data, but also experiment and interview subjects.

Describe the way the external supervisor will be involved in the project.

Provide a project timeline, specifying the main tasks and the time allocated for them, milestones (time of achievement of intermediate goals)

**REFERENCES**

List references, including information Authors, Title, Journal/Book/Conference/Website, Publication date