



# **Design and Development of a Mobile Application for Citizen Science-Based Landslide Observation and Data Collection**

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submitted by

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# Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
<b>2</b>	<b>Related Work</b>	<b>4</b>
2.1	Mobile applications for data collection . . . . .	4
2.2	Technical aspects of data synchronization . . . . .	4
<b>3</b>	<b>System Specifications</b>	<b>5</b>
3.1	Hardware . . . . .	5
3.1.1	Sensors . . . . .	5
3.1.2	Storage . . . . .	5
3.1.3	Energy . . . . .	5
3.2	Software . . . . .	5
3.2.1	Operating Systems . . . . .	5
3.2.2	User Interface & Experience . . . . .	5
3.3	Constraints and considerations . . . . .	5
3.3.1	Network Coverage . . . . .	5
3.3.2	Localization . . . . .	5
3.3.3	Timestamps . . . . .	5
<b>4</b>	<b>Implementation</b>	<b>6</b>
4.1	Core Features . . . . .	6
4.2	Data upload . . . . .	6
4.3	Challenges . . . . .	6
<b>5</b>	<b>Evaluation</b>	<b>7</b>
5.1	Tests . . . . .	7
5.1.1	Functionality . . . . .	7
5.1.2	User Experience and Usability . . . . .	7
<b>6</b>	<b>Discussion</b>	<b>8</b>
6.1	Process . . . . .	8
6.2	Ethical and Data Privacy aspects . . . . .	8
<b>7</b>	<b>Conclusion &amp; Outlook</b>	<b>9</b>
7.1	Summary . . . . .	9
7.2	Future Work . . . . .	9

# **1 Introduction**

## **2 Related Work**

### **2.1 Mobile applications for data collection**

### **2.2 Technical aspects of data synchronization**

# **3 System Specifications**

## **3.1 Hardware**

### **3.1.1 Sensors**

### **3.1.2 Storage**

### **3.1.3 Energy**

## **3.2 Software**

### **3.2.1 Operating Systems**

### **3.2.2 User Interface & Experience**

## **3.3 Constraints and considerations**

### **3.3.1 Network Coverage**

### **3.3.2 Localization**

### **3.3.3 Timestamps**

# **4 Implementation**

## **4.1 Core Features**

## **4.2 Data upload**

## **4.3 Challenges**

# **5 Evaluation**

## **5.1 Tests**

### **5.1.1 Functionality**

### **5.1.2 User Experience and Usability**

# **6 Discussion**

## **6.1 Process**

## **6.2 Ethical and Data Privacy aspects**

# **7 Conclusion & Outlook**

## **7.1 Summary**

## **7.2 Future Work**

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