**Outline for PhD Thesis**

**Working title: Context Awareness for Navigation Applications**

1. **Introduction (3-4 pages)**
2. **Overview of Context Awareness (7-8 pages)**
   1. **History of Context Awareness (2 pages)**
   2. **Theory of Context Awareness (2 pages)**
   3. **Technologies Relevant to Context Awareness (2 pages)**
   4. **Applications of Context Awareness (1-2 pages)**
3. **Overview of Machine Learning (7-8 pages)**
   1. **Introduction (1 page)**
   2. **Supervised Machine Learning (3 pages)**
   3. **Unsupervised Machine Learning (2 pages)**
   4. **Semi-supervised Machine Learning ( 1-2 pages)**
4. **Detecting Mobility Context of Smartphone Users (10-12 pages)**
   1. **Background (1 page)**
   2. **Methodology (3-4 pages)**
   3. **Data Analysis (3-4 pages)**
   4. **Results and Conclusions (3 pages)**
5. **Optimizing Routes in Icy-Sea Maritime Contexts (10-12 pages)**
   1. **Background (1 page)**
   2. **Methodology (3-4 pages)**
   3. **Data Analysis (3-4 pages)**
   4. **Results (3 pages)**
6. **Conclusions (5-6 pages)**
   1. **Summary of Author’s Contributions (1 page)**
   2. **Towards a Unified Concept of Context (1-2 pages)**
   3. **Benefits of Open Data to Context Awareness Research (2 pages)**
   4. **Important Future Applications (1 page)**

**Total 42-50 pages**