Master’s Thesis/Project Proposal

Type Title Here

Type student name Here

Current Date

Faculty Advisor 1

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CMU Dept \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Faculty Advisor 2 (if applicable)

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CMU Dept \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reader

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CMU Dept \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

INI Graduate Programs Academic Advisor

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Introduction/Background

This document provides a template for an INI student to use when submitting a proposal for a project or a thesis. We will include examples in the template to help the student get started. Students should always refer to the INI handbook [1] to check for further guidance. Please note that anything you see below in *italicized gray font* is to show an example, please make sure that your final document is properly formatted to use 11 pts Times New Roman, and NOT THE FONT SETTINGS in the greyed examples.

In this section for the overview and justification of the work, explain why this work is relevant to your degree program and should be allowed (we recommend no longer than a page for this section). We encourage you to be creative and to deeply think about your chosen topic or project.

Always remember to include citations for definitions and related work; for example, using IEEE format. There are MS word Plug-ins that make managing and inserting citations easy; Zotero (free, open source) [2], and Mendeley (proprietary, CMU license) [3] are two popular examples of plug-ins.

To help you get started with this section, use the following list of recommended content:

* Brief introduction to the problem
* The global impact of this problem (*e.g. it will enhance IoT technology, advance the field by highlighting security or privacy concerns, provide developers with guidelines, show a demonstration of a possible solution, etc.*)
* Summary of other approaches that are available and how the approach in this study is new, unique, or adds value
* What do you bring to this work? What skills do you possess that make you a good candidate to work on this project? (*e.g. I have taken a reverse engineering course and I will apply my skills to reverse engineer application X to investigate Y*)
* If your study includes research question(s), then list those questions and explain how you plan to address them

# Problem Statement

You need a couple of lines for your problem statement.

*This master’s thesis/project will [include a short statement that summarizes what the thesis/ project is about and what it is planning to achieve].*

# Description and Proposed Approach

This section should include description of your plan/methodology/approach for the thesis/project on and how would you approach

# Milestones

With your project advisor, define a timeline with appropriate milestones. These milestones are to be reviewed and discussed with your thesis/project advisor prior to submitting the paperwork to the INI. The following table is an example.

|  |  |  |
| --- | --- | --- |
| **Milestones** | **Duration** | **Description** |
| **Task 1** | 1 week | * Complete a literature review * Design tool X |
| **Task 2** | 1-2 weeks | * Review design and deploy the tool for testing |
| **Task 3** |  | ………. |
| **Tasks….** |  | ……. |

# Unit Assignment

You need to determine how many units of work will be completed in a given semester. Here are some examples of unit assignments students used in the past:

* *For this thesis, the plan is to spread the work over two semesters. 12 units in Fall 2023 and 24 units in Spring 2024*
* *For this project, I plan to complete all the work (36 units) in Spring 2024.*
* *For this thesis, the plan is to spread the work over two semesters. 24 units in Fall 2023 and 12 units in Spring 2024*

# Deliverables

* Final master thesis/project report submitted to INI.
* Artifacts, examples include:
  + User study materials (surveys, interview scripts, etc.)
  + Software tool available on GitHub
  + Dataset available on CMU data repository [5].
  + Final presentation to the research team, and/or through an INI research seminar

# Faculty Advisor Justification

This section should include the name of the faculty advisor, their interest in the thesis/project, and why they are an appropriate thesis/project.

*e.g. Dr. Barbara Gordon Ph.D. [4] is currently the faculty advisor for the research team working in Project X. She is knowledgeable and enthusiastic about the project, and she is willing to provide guidance for this work. Dr. Gordon’s research interest in hacking systems [4] fits well with my interests for project. …..*

*[optional] In addition to Dr. Gordon, I will be working closely with Dr. Tony Stark, a post-doctoral researcher in Dr. Gordon’s lab. Dr. Stark will be overseeing the day-to-day progress of my work.*

# References

[1] “INI Student Handbook - Information Networking Institute - College of Engineering - Carnegie Mellon University.” [Online]. Available: https://www.cmu.edu/ini/student-services/enrollment/handbook.html. [Accessed: 06-Dec-2019].

[2] “Zotero | Your personal research assistant.” [Online]. Available: https://www.zotero.org/. [Accessed: 06-Dec-2019].

[3] “Mendeley | Carnegie Mellon University Libraries.” [Online]. Available: https://www.library.cmu.edu/research/tools/mendeley. [Accessed: 06-Dec-2019].

[4] “Barbara Gordon,” *Batman Wiki*. [Online]. Available: https://batman.fandom.com/wiki/Barbara\_Gordon. [Accessed: 06-Dec-2019].

[5] “Carnegie Mellon University data repository.” [Online]. Available: https://kilthub.cmu.edu/. [Accessed: 06-Dec-2019].