# System Requirements Specification

## Project Odin

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Note: This document is constantly under revision due to our chosen methodology, and is subject to change.

Current version: v**0.1**

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# Introduction

This section describes the scope of Project Odin, as well as an overview of the contents of the SRS document. Additionally, the purpose of the document is defined as well as a list of abbreviations and definitions.

## Purpose

The purpose of this document is to provide a thorough description of the requirements for Project Odin. The requirements, constraints, interfaces and interactions with other systems will be described in this document.
This document is intended as a point of reference for the client, as well as a means of keeping track of our decisions and the project for us as the development team.

## Scope

"Project Odin" is a tool for generating computational models via a simple drag-and-drop interface. The idea is that an average user with little to no programming experience will be able to build highly complex models, for a range of tasks such as machine learning, statistical analysis or image manipulation.
Users will also be able to create *projects* which will each contain a computational model, which will then be able to be used as a component in another persons model. In this way, large, complex models can be built up from components which consist of models themselves. Project authors will be able to share their projects, including a description, and be able to view the usages and popularity of their components.

## Definitions, Acronyms and Abbreviations

- **User** - A user that is using the application.
- **Model** - A computational model built in the application.
- **Project** - A computational model that has been shared.

## References

*Empty for now.*

## Overview

This document includes 4 sections:

1. Introduction
2. Overall Description
3. Specific Requirements
4. Appendices

The sections are laid out as follows:

### Section 2 - Overall Description

Section 2 provides an overview of the systems functionality and it's interaction with other systems. This chapter also outlines the users of the system and their interaction with it. Finally, the constraints and assumptions are defined.

### Section 3 - Specific Requirements

Section 3 starts off by outlining the specific requirements for each external interface, followed by a description of the function requirements. This is followed by the performance requirements and design constraints. Section 3 then describes the attributes or non-functional requirements of the system, including it's reliability, security, availability and interoperability. Finally, any other requirements not under the preceding categories are listed.

### Appendices

The appendices are empty for now.

# Overall Description

This section will provide an overview of the systems functionality and it's interaction with other systems. This chapter will also outline the users of the system and their interaction, as well as the development constraints and assumptions made.

## Product Perspective

*Empty for now.*

### System Interfaces

*Empty for now.*

### User Interfaces

*Will be expanded upon*
The user interface primarily makes use of a drag-and-drop component based system. Each component acts as a function which can be made up of further components. Users add components in to a work-space where they can add links between components by dragging from one component's input or output nodes to those of another component.

The navbars and other sections of the interface are all stylized with Materialize, so as to have a unified theme and styling. These navbars will contain the functionality needed to handle the management of the components created using the system.
*This part of the interface will be expanded upon further into the project.*

### Hardware Interfaces

*Empty for now.*

### Software Interfaces

*Empty for now.*

### Communications Interfaces

*Empty for now.*

### Memory Interfaces

*Empty for now.*

### Operations Interfaces

*Empty for now.*

### Site Adaptation Requirements

*Empty for now.*

## Product Functions

*Empty for now.*

## User Characteristics

*Empty for now.*

## Constraints

*Empty for now.*

## Assumptions and Dependencies

*Empty for now.*

# Specific Requirements

This section starts off by outlining the specific requirements for each external interface, followed by a description of the function requirements. It then continues with the performance requirements and design constraints, as well as the the attributes or non-functional requirements of the system. Finally, any other requirements not under the preceding categories are listed.

## External Interface Requirements

## Functional Requirements

*Empty for now.*

## Performance Requirements

*Will be expanded upon.*

### User Interface

- The drag-and-drop system needs to render as quickly as possible, preferably in under 3 seconds.

- The drag-and-drop system needs to avoid producing input lag by being too heavy on system resources.

## Design Constraints

*Empty for now.*

## Software System Attributes

*Empty for now.*

### Reliability

*Empty for now.*

### Security

*Empty for now.*

### Availability

*Empty for now.*

### Interoperability

*Empty for now.*

## Other Requirements

*Empty for now.*

# Appendices

*Empty for now.*