

Intelligent Reasoning Systems – Project Scope Document

Project Name:	Smart Invigilator Allocation System (SIAS)
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1. Background / Problem Statement:

Currently, in one of the Polytechnic in Singapore, the allocation of the invigilators duty to each test venue is performed and planned manually by the examination officer. It is a challenging and time-consuming task. There are multiple data required in order for the examination officer to do the right allocation without errors. The data consists of the lecturers, examination dates and time, class group, test venue and test module. Given the complexity of the manual allocation, the examination officer is unable to accommodate other vital information such as invigilators calendar, preference, etc., during the allocation.

In some cases, there is a situation, where the assigned invigilator is not able to perform the duty on the final minutes before the commencement of the test. This situation will make the already planned allocation even more challenging. To mitigate such a situation, a standby invigilator is assigned to replace the duty.

2. Goal / Objective:

To develop an intelligent system that provides an optimum allocation of the invigilators based on the set of defined rules that can be able to handle unexpected situations with minimal impact to the overall planned allocation.

3. Approach:

Stage-1: Initial allocation based on the invigilator available calendar and preference

Stage-2: Reallocation based on invigilator acceptance / changes

Stage-3: Reallocation on the day of examination based on invigilator attendance

4. Key Functions:

- Accept various data points, such as invigilators list and their calendar, exam dates and time, test venues and test modules.
- Accept invigilators preferences exam dates and time.
- Use the data points and defined rules to form an optimized allocation schedule for the invigilators.
- Communicate with the invigilators on their respective allocation details.
- Enable the invigilators to accept or alter the schedule based on their preferences.
- Reallocate and communicate to impacted invigilators for their confirmation
- Retrieve the attendance of the invigilators on the day of exam.
- If attendance is not marked within a stipulated time, reallocate to available invigilators and communicate to impacted invigilators.