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|  | ISTANBUL AYDIN UNIVERSITY  FACULTY OF ENGINEERING  GRADUATION PROJECT INTERIM REPORT |

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| **Project Title** | MR images and Detecting Tumors using ANN’s in Image Processing, and The Contribution of Ensemble Techniques to Accuracy Rate | |
| **Project Team** | Şükrü Bora Karakuş - B1905.090021 – Software Engineering  Ismail Eza - B1905.090045 – Software Engineering  (For group projects, the name of the group leader will be the first.) | |
| **Date of Report** | 08.01.2023 | |
| **Timeline and**  **Current Project Phase** | October |  |
| November |  |
| December |  |
| January | Collecting MR image data suitable for the selected model / method. |
| February |  |
| March |  |
| April |  |
| May |  |
| June |  |

**Objectives Achieved in this Period:**

(Write whatever you have completed and achieved to the date)

* A suitable format for requirements has been prepared.
* Selected models to apply for training have been chosen.
* The ensemble techniques to be applied after training the models have been selected.

**Challenges and Solutions:**

* Challenge-1: Insufficient amount of data.
* Solution-1: Necessary data was collected from communities like Kaggle.com.
* Challenge-2: Difficulty was encountered in selecting ensemble techniques to be applied after model training.
* Solution-2: Ensemble techniques used in previous projects were reviewed, and the most suitable ensemble technique for our project was selected.

**Attachments:**

* **Software Requirements Specifications (SRS)** (Prepare this as a different document by 08th January 2024 and submit as a different (second) interim report!)

Contents of the SRS is as follows (Obey the requirement quality attributes that you learned in Software Requirements Engineering course!):

1. Introduction: This section gives an overview of the entire SRS. It typically includes the purpose, scope, definitions, acronyms, abbreviations, references, and overview of the SRS.

2. Overall Description: Here, the general factors that affect the product and its requirements are discussed. This section might include product perspective, product functions, user characteristics, constraints, assumptions and dependencies.

3. Specific Requirements: This is the most extensive section of the SRS, detailing all of the software requirements to a level of detail sufficient to enable designers to design a system to satisfy those requirements, and testers to test that the system satisfies those requirements. Within this section, it typically includes:

1. Functional Requirements: Specific behaviors or functions of the system.
2. Non-functional Requirements: These include performance requirements, security requirements, software quality attributes like usability, reliability, and maintainability.
3. Data Requirements: This involves detailing the data stored and used by the system, including data formats and structures.
4. Interface Requirements: Descriptions of all interfaces to external systems or users, including graphical user interfaces and hardware interfaces.

4. References

* **Preliminary Design Document (PDD)** (Prepare this as a different document by 08th January 2024 and submit as a different (second) interim report together with SRS!)

Contents of the PDD is as follows:

1. Introduction

Purpose: Define the purpose of the document.

Scope: Outline the scope of the project.

Background: Provide background information and context briefly.

2. Project Overview

Objectives: State the main goals of the project.

Constraints: Identify any project constraints (time, users, budget etc.).

3. Hardware Design *(Fill out this part if it’s applicable to your project)*

Overview: General description of the hardware components.

Specifications: Detailed specs (size, capacity, performance).

Diagrams: Schematic diagrams or drawings.

Materials: List of materials and components.

4. Software Design

Overview: General description of the software functions.

Architecture: Details of the software architecture.

User Interface (UI): Sketches or mockups of the UI.

Algorithms: Description of key algorithms or logic.

Programming Languages: List of languages and frameworks used.

Data Management: How data is stored, accessed, and managed.

5. Integration Plan

Hardware-Software Integration: Method for integrating hardware and software components.

Testing: Outline of testing procedures for both hardware and software.

6. Risk Analysis

Potential Risks: Identification of potential risks.

Mitigation Strategies: Strategies to mitigate identified risks.

7. References

**Please read the document thoroughly before asking, PLEASE….**

**If possible, never ask questions about this! Because you will be a software engineer soon, you are not a kid, learn yourself, struggle to learn, discover yourself…**

**IMPORTANT WARNING**

**Do NOT use AI-generated text (including ChatGPT or other AI tools) to complete any portion of this homework assignment. Your work should be entirely your own. Using AI-generated text will be considered a violation of academic integrity and will result in a dramatic decrease in your score for this assignment.**

**I will use tools to detect AI generated text!**