İstanbul Aydın University
Engineering Faculty
Software Engineering Department

SEN 413 / SEN 414 - Graduation Project - 2
Proposal Form for Instructors and Students

Academic Year: 2020-2021 **Semester: Spring**

1. Logistics

Supervisor: Dr. Elnaz PASHAEI **Co-supervisor:**
Proposal No.: 1
Proposal Date: 08.06.2021
Number of Students: 2
Prerequisites:

- Good command of English
- Programming experience in Python, Java, and JavaScript
- Understanding of Deep Learning models and fundamentals
- Familiarity with version control systems.

2. Subject Classification

- Deep learning approaches for COVID-19 detection based on chest X-ray images

3. Title of Project

Corona Finder

4. Description of the Project

Covid19 infection diagnosis based on chest X-Ray images by the help of the state-of-art deep learning methods. Project will be served to users by both website and mobile application.

5. Scope of the Project

The project will include wide-range research, data collection from various health organizations and lots of effort in order to develop a product, which works fast with deep learning model, to be released. All activities will be held by developers and by the help of some experts. At the end, android application and web application will be the project deliverables as high-quality products.

6. Goals of the Project:

The sole purpose of the project is diagnosis Covid19 infection by looking at the chest X-Ray images of the user. To achieve this goal, the state-of-art deep learning methods, such as CNN (Convolutional Neural Networks), will be key. At the end of the project, there will 2 different platforms, which are mobile application and web application, that can be used by the users who are greater than 7-year-old.

7. Key Techniques

- Reviewing The Literature
- Setting Research Questions, Objectives, and Hypothesis
- Choosing The Design of The Study
- Collecting Data from Various Organizations
- Processing and Analyzing Data

8. Project Outcome

This project will be the simplest application on the market, that even a 7-year-old could use it easily, as well as it will be the most effective and accurate application about Covid19 diagnosis. As for speaking technical part, the project will diagnose Covid19 cases with more than %95 accuracy rate.

9. Hardware/Software/Lab/ Equipment Requirements

- Google Colab
- Python
- Java
- JavaScript
- Tensorflow
- FastAPI
- React