

List of Proposed Graduation Projects Academic Year 2017/2018

Dr. Ahmed Diaa

Project Title: Identification of the class of English text among several classes

Abstract: The aim of the project is to classify an unknown English text into one of several classes. A collection of files containing English text will be gathered from the internet. Each file will be classified into one of a group of classes according to the content of the file. Learning techniques will be used to differentiate between and classify each file to the corresponding class. Success rates will be calculated.

Dr. Ahmed Seif

Project Title 1: Scientific conference management system

Abstract: There are a lot of scientific conferences held all over the world. The authors send their proposed papers to the committee in order to be reviewed. The proposed system is a web application for the management of the conference. It helps the authors to submit and receive the decisions from the committee. Also , it helps the committee to distribute the reviewing assignments among the reviewers and get their feedback and decisions.

Similar projects: <https://www.easychair.org>

Project Title 2: Job recruitment and training system

Abstract: There are a lot of job applicants with different qualifications. Also, there are a lot of jobs offered by a lot of employers. The proposed system matches the applicants with the most suitable jobs and proceed with the process of recruitment. The system also matches the job applicants with training centers to get courses. The system provides online exams to evaluate the applicant in some skills like languages and IT skills.

Similar projects: <https://www.bayt.com>

Project Title 3: Game

Abstract: Unity is a game development platform used to build high-quality 3D and 2D games, deploy them across many platforms. The idea of the game is left to the team.

Similar projects: <https://unity3d.com/>

Dr. Abdellatif Elkouny

Project Title 1: University Admission System Project

Abstract: University Admission System is a web-based application built with the aim of computerizing the admission procedure in universities and colleges. The system proposed here incorporates handling and management of multi-departmental and multi-divisional system that includes various daily activities in the system.

Tools: University Admission System will be developed using Java programming language with HTML/CSS used for user interface, JavaScript for client-side scripting and MS Access/MySql/Sql/Php for the system database server side.

Project Title 2: Search Engine Project

Abstract: Search Engine is a web-application developed in Python scripting language. The main aim of the project is to develop an excellent searching platform on internet. The searching mechanism of proposed search engine is similar to the popular search engines Google, Bing, Ask.com, etc. to some extent.

The proposed Search Engine Python Project uses modern software technologies algorithms such as search engine optimization technique, page ranking, indexing and web crawling. The result displayed by the proposed search engine is distinct and unique.

Tools: Search Engine Python Project will be developed using Python programming language with HTML/CSS used for user interface.

Project Title 3: Digital watermarking Project

Abstract: Digital watermarking project is proposed as a viable solution to the need of copyright protection and authentication of multimedia data in a networked

environment, since it makes possible to identify the author, owner, distributor or authorized consumer of a document.

Tools: Digital watermarking Project will be developed using Matlab

Project Title 4: Secure messaging Project

Abstract: Facebook introduced end-to-end encryption to its more than 1 billion WhatsApp users in April. End-to-end encryption means only sender and recipient can see each other's messages. They can't be decoded along the way, not even by the app maker. In WhatsApp's case, the encryption is based on the Signal protocol – the same tech also used by open source messenger Signal. WhatsApp and Threema their code isn't public like open source code is. This means you have to trust them enough to believe they haven't snuck something into the code which could let them override the encryption in specific cases. Our project is intended to develop a free and open source software for secure messaging.

Tools: Secure messaging Project will be developed using java/HTML/CSS /MySQL

Dr. Sherif Elshafie

Project Title 1:

Building a set of experiments to model a database of computer usage activity using association rules.

Abstract: starting from a data set of computer usage students will be required to come up with association rules model to the data set.

Tools: experience in programming, R, python, scikit

Project Title 2:

Designing and evaluating an algorithm for anomaly detection of computer usage data.

Abstract: starting from a model of computer usage data students should design an algorithm to detect anomaly instances in the data set model. Evaluation of the algorithm will be conducted after.

Tools: experience in programming, R, python, scikit

Project Title 3:

Building a demonstrative game engine using OpenGL

Abstract: Students will build a game environment using OpenGL framework. The environment is a complex of modern computer graphics techniques (ex: creating and loading buildings, characters and shapes - applying textures and light and all properties that could be needed to mimic natural-looks objects- apply animation to the objects). Students will also build a GUI that controls the environment properties using antTweakBar or a self made GUI.

Number of students allowed in project: 2-3

Tools: C++ programming, GLSL(shader programming language), modern openGL library, Windowing Libraries (GLEW, GLUT, SDL ..etc), Blender or any alternative application for creating 3D objects

Assoc. Prof. Hussam Elbehery

Project Title 1: Electronic Medical Records on the Blockchain

Abstract: Restores patients' control over their medical data. It does this by linking access to the patient's medical records across the variety of their doctor's databases. By functioning as an interface between institutions' siloed health records it also allows patients to securely grant other doctors access to their personal information, as well as healthcare providers, researchers, and even the patient's children and grandchildren.

Tools: Blockchain, Ethereum, Solidity, NodeJS, JavaScript (OOP side of it), Angular 4, Ionic 3, TypeScript 2, HTML / CSS, JSON, REST, HTTP WebServices and APIs, Cordova, Agile, database /ER diagrams

Project Title 2: Electronic Police Portable Ambushes

Abstract: The project introduce an idea of attach each vehicle by an RFID card including all information about the vehicle and the driver (who should be the owner) as the Police Portable Ambushes contains two equipment (Portable): RFID scanner to check the incoming vehicles to identify them also register these vehicles on a database system. Computer vision system including Hi-Tec digital camera beside digital system to scan and view area of the ambushes to count and correlate with the scanned vehicles to get the differences which may be threat for the Ambushes police men.

Tools: Matlab (Image processing and Morphology operations) – GUI – Data base – Web designing - RFID Image acquisition systems by PC and using Matlab.

Project Title 3: Smart Elevator System

Abstract: This correspondence proposes an image processing model based method to determine the area weight. The proposed method uses a two-stage inference model which is built by the study of area-weight properties and expert knowledge via digital cameras distributed in each floor in a building and the weight loaded inside the elevator also the requesting priorities. The proposed method shows more desirable

results than the conventional method in simulations through less consuming power and increasing the life time for the elevators itself and less economic stuff by decreasing the maintenance costs.

Tools: Matlab (Image acquisition and processing) – GUI - Digital cam acquisition by PC and Matlab.