

# College of Engineering and Technology, CAIRO <u>Computer engineering department</u>

## Complete medical communication network

- 1 Dr.Gamal Selim Supervisors
  - 2 Dr.Sherif Fadel
    - 1 Ahmed Maher
    - 2 Mohamed Moheb
- Students 3 Maged Aziz
  - 4 Samer Al Awad

## <u>Abstract</u>

The purpose of this project is to design and implement an integrated medical communication system to facilitate communication in the medical industry. This will be accomplished through various means, amongst which are a mobile application that allows the doctors to view patient's medical history and profile, search for patients that follow him and write prescriptions depending on their diagnosis. Patients will be able to search for doctors depending on various criteria, View their medical history at any time and order medicines from pharmacies to be delivered home. Pharmacies will use a web application to receive orders from patients and have their medicines delivered to their homes after checking the availability of their orders in the pharmacy's stock. The project is divided into two parts, First an android application for mobile phones and second a web application for pharmacies.

# College of Engineering and Technology, CAIRO <u>Computer engineering department</u>

## Monitoring and tracking system for public transport Expert System

1 2	prof.Dr Mahmoud Ashry
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	1 2 1 2 3 4

#### Abstract

Provide a simple and cost efficient system to fulfil customer needs.

- Set a pre determined path and track if the driver follows it.
- Signal a buzzer if the driver doesn't.
- Store all fleet information on database.
- Track how many times the driver left the pre-determined path
- Track the average speed of each driver
- Track the total distance travelled by each driver.
- Pinpoint and track the current location of the vehicle.
- Use database to track bus engine performance.

# College of Engineering and Technology, CAIRO <u>Computer Engineering Department</u>

## Indoor Positioning System

- Supervisors: Prof. Mohsen M. Tantawy
- Students: 1- Abdulrahman Gamal El-Deen Fattouh 2- Aya Tarek El-Henedy 3- Maha Mohammed Essam
  - 3- Mana Monammed Essam
  - 4- Mohammed Adel Hafez

## Abstract:

Positioning services are increasingly used for applications such as navigation, advertising and social media. While outdoor navigation based on Satellite and/or cellular system works well, indoor navigation is a much tougher challenge.

This project presents an indoor positioning method based on Wi-Fi fingerprinting that relies on the recording of the signal strength from several access points in range and storing this information in a robust database along with the known coordinates of the client device in an offline phase. This information can be deterministic or probabilistic. During the online tracking phase, the current received signal strengths at an unknown location is compared to those stored in the fingerprint and the closest match is returned as the estimated user location.

The main challenge for this project is to design, implement, and test a low cost system with acceptable accuracy.

# College of Engineering and Technology, CAIRO <u>Computer Engineering Department</u>

## Student information system using a wireless technology

1 D Supervisors

- Dr. Ashraf Tamam
- 1 Alaa mohamed hosny
- 2 Saad Mohamed
- 3 Abdelrahman Maher Mohamed
  - 4 Kareem Ahmed

## <u>Abstract</u>

Students

The main aim is to build an information system that contains data about students and courses ,the system allows students to query for required documents and attendance status by using one of the wireless technologies .

Students information system using a wireless technology helps the student for knowing more about the attendance in each course This system can store the time of the attendance time for each student so the doctor can open the registration of the attendance by entering his own card then each student touching his card and finally the doctor will close the attendance .

This system allow the students to know information about the attendance in each course so by touching the screen of the department by his own card then attendance information will appear such as times of absence and warning drag.

## College of Engineering and Technology, CAIRO Computer Engineering Department

## Virtual Dressing Room Project

Supervisors 1: Professor Doctor \ Gamal Selem 2: Doctor \ Shrief Fadel

#### Students 1: Mohamed Ahmed Mostafa Fahmy

- 2: Abdelrhman Amin El Mitwaly
- 3: Mostafa Hamdy Hegaze
- 4: Ahmed Amr Darwish

#### Abstract:

This project implements a real-time virtual trying on system using Kinect as input device. Besides the basic feature of trying clothes, the Virtual Fitting Room system also supports features of photo taking and downloading it. The user interface design evaluation and final system evaluation have been done carefully to show the system usability. The project purpose is to enhance users' shopping experiences by using the system, so that they can spend less time on queuing for fitting rooms and can also easily share their appearances after downloading their photos.

#### College of Engineering and Technology, CAIRO Computer Engineering Department

#### WhatsUp: Analysis for the Big Data Streams

Supervisors 1: Dr. Manal Helal

Students 1: Mohammed Mahmoud Sayed	9101876
2: Ahmed Raafat Ahmed	11105308
3: Sani Abubakar Maikafi	10103237

#### Abstract:

Data is big, ubiquitous, and continuous and not all input requires storage or analysis. Stream processing uses the inherent parallelism of the independence of data streams, by processing them as they are received independently, and processes only what is required. Apache Storm is an open source real-time distributed computation system that processes unbounded streams of data. It works by creating a topology (a directed graph), that is a multi-rooted tree, where roots (spouts) are data streams input that goes to nodes that are processing units (bolts). Bolts output can go as input to another processing unit, or actioned in any way such as: stored in a databases, send email or alarming signal. Storm APIs are in Java language and connects to any data source (facebook, twitter and other social media feeds, search results from the web or database, distributed messaging systems, sensor networks signals). Storm bolts can be computed locally on the same machine, and can be computed on a remote Storm cluster. Storm handles the parallelization, partitioning, and retrying on failures when necessary. The team configured the Apache Storm on a single node, and created a topology that receives stream from twitter APIs searching for a given query as a main spout. The stream of results is computed to count how many users are posting about the subject, and display the unique (not retweeted posts) among other statistics about the users or the topic.

## College of Engineering and Technology, CAIRO Computer Engineering Department

#### **Autonomous Car Project**

# Supervisors 1)Prof. Dr. Ahmed Fahmy Amin 2)Eng. Ahmed Mohsen Ahmed

#### Students

1)Asmaa Yehia Abd El Hamid

2)Mustafa Magdy Daif

#### <u>Abstract</u>

This project aims to implement autonomous car. Our autonomous car is capable of recognizing road signs and traffic lights, as well as being self-driven on a given track in real-time. The most promising technologies for autonomous car systems are vision sensing and image processing were used in our project. Furthermore, a functioning system has been implemented using a standard PI-camera mounted on a testing car and Neural networks are used to extract patterns and detect road to be within its track. Color information is also used for the segmentation and a model matching algorithm is used for recognition.

# College of Engineering and Technology, CAIRO <u>Computer Engineering Department</u>

"PharmAnalytics" Pharmaceutical Data OLAP Analytics System

Supervisors: Dr. Manal Ezzat Helal Students: 1- Mohamed Maher Mohamed 2- Mohamed Khaled Yosery 3- Abdulrahman Ashraf

Abstract:

This project aims to build an OLAP (OnLine Analytical Processing) system for a pharmaceutical dataset. The pharmaceutical data is characterized by being high dimensional, and require multidimensional analysis to support corporate decision making. High Dimensional Data analysis require viewing data from multiple perspectives that would require complex SQL statements and long processing time by traditional relational databases. OLAP servers provide a multidimensional Data model that allows complex analytical queries to execute much faster. The objective is to acquire a RDBMS schema, and model it on an OLAP server such as Oracle OLAP Analytic Workspace manager, design and implement the required OLAP queries, reports, and analysis to display in a web application.