Hospital Stats

Short Description:

It is essential to be data-driven when managing your work. To be able to manage your work in an easy and efficient way, it is required to be able to check the data remotely, whenever and wherever you are. To achieve such a management system, our hospital requires a web application that would report to us as long as we have internet access. As a start, our physician in charge of the laboratory procedures would like to observe the lab data when she is not present in the lab. To be able to do this, she requires a web application that would show her what she wants, so that if needed she can consult to the patient using data or observe and manage data she needs in order to report it to the government (i.e., Ministry of Health). The application in its most primitive form should be able to perform tasks such as:

1) Show the lab data for a specific patient in a specific instance, note that there are many different types of lab tests.
2) Tabulate required lab statistics, such as total test amounts and/or tests asked per physician.

Type of the Project:
Web Development

Brief Info of the Customer:

Customer Name & Surname

Customer e-mail

Elcric Game

Short Description:

I want to have a multiplayer game that can be played through a modern web browser. Each player should be able to join the game from a web site providing only a nickname. Each player controls a white circular object (aka circle) with his/her nickname on its center. Players move their circle with the help of his/her mouse and share the same stage. Each player must be able to see other players and their movements in real time. If two circles collide the player with the larger diameter “eats” the smaller one and increases its size accordingly. The speed of the circle should be in reverse proportion to its size.

The game will have a large enough stage that can accommodate up to 5 players. There will also be multiple small size blue circles moving around randomly. They will act as “baits” to the players so that they can grow in size (but decrease in speed). The score of each player will be calculated according to the size of their circle and will be listed on the upper right side of screen. New baits should be introduced to the game from the corners of the stage randomly when their number decreases so that players have a necessary amount of “food” floating around all the time.

Type of the Project:
Web Development

Brief Info of the Customer:

Customer Name & Surname

Customer e-mail

NOTES:

The idea of the project is taken from a popular online game called “Agar.io”. Node.js is probably the most suited JavaScript runtime to implement this project.

Turkish ChatBot - OttoBot

Short Description:

This project is a chat bot platform that can interact with users in Turkish. There are 2 main goals in this project. First is to classification and keyword detection. Second is making a proof of concept app with Facebook Messenger Bot. This app is a bot who introduces you to new friends based on your interests.

Type of the Project:

Web Development

Brief Info of the Customer:

Customer Name & Surname

Customer e-mail

NOTES:

In order to make a robust bot you need to understand what is written. In this project we need to correct misspelled words or handle Turkish English character translation. In Natural Language Processing this process is called Normalization. Since this is a common problem for Turkish this part of the project can be used in different applications. This is why messenger bot and Turkish normalization parts are separated.

By normalizing and detecting keywords in text system will return a string specified for detected keywords. If an action is defined for the keywords action must be taken (like a call to a URL).

Rafiqi Mobile App

Short Description:

A mobile app designed to allow connecting refugees to mentors, resources, and opportunities based on their needs.

1. Refugee logs in to the app (using his/her Facebook credentials). He/she then is exposed to a set of choices/paths, in terms of help proposals:
    a. I want help for mastering a foreign language
    b. I need coaching to know what would be my best next professional step
    c. I need psychological support
    d. I want to learn new skills
    e. I want to open my own business

2. When clicking on any of the above paths, the refugee will face a new set of choices. a. I want help for mastering a foreign language
    i. Enter the name of the language
    b. I need coaching to know what would be my best next professional step
    i. Enter your field of work or study (e.g. civil engineering, culinary services…)
    c. I want to learn new skills
    i. Choose from the set of the skills our portfolio:
    ii. Web Development
    iii. Data Analytics

iv. Project Management

v. Online Marketing

d. I want to open my own business

i. Enter a brief description of your business: e.g. opening a restaurant for Mediterranean food

3. Based on his/her choice, the refugee will be presented with a set of options including mentors profiles, work/training opportunities and online learning journeys. A specific action will be associated to each of the options:

a. Mentor -> Get in Touch (opens a gmail application)

b. External training opportunity <- Apply through origin website (redirects to origin website) c. Online Rafiqi learning journey <- subscribe!

4. The refugee should receive notifications when a new course starts (in case of subscribing to a learning journey) or when the mentor accepts his/her invitation to become mentor

5. When the refugee logs in again to the app, he should see a status of their progress and be presented with the next step. Examples:

a. Schedule next meeting with my mentor (redirects to gmail calendar)

b. Watch first course session! (redirects to YouTube/Vimeo or other websites)

Type of the Project: Mobile App

Brief Info of the Customer:
Customer Name & Surname

Customer e-mail

Virtualized IoT Testing Interface

Short Description:

Internet of Things is a topic that is gaining increasing momentum, not only in the wireless communications community but also in the cloud and software platforms one. While the server/software part is challenging due to the development of massive analytics, the wireless part is instead struggling to provide proper connectivity to each of the devices. As a test and measurement company, it is in our interest to provide our customers with a system able to test what happens when massive devices are deployed. In order to do so, we are creating a hybrid hardware and software system that can re-create such a situation.

As part of the product, one of the main components is the customer-facing software interface, which should enable the control of the product components, as well as providing a user-friendly input method for the customer. In particular, the interface should be a web-based system that integrates a mapping component that allows the user to virtually deploy the cellular base station and the cellular IoT devices on the geographical map, select each device/component, and provide input on e.g. which Operating System image file to use. The input should be either manual (one device at a time) or automated (random deployment, selecting the number/type of devices).

The GUI should be based on a palette that allows drag&drop of the components to the map or allows a right-click interactive menu on the map itself. The right-click on a deployed object should also open a menu containing all the parameters/info of the component itself.

The customer should be able to press a “play” button (and eventually pause, and “accelerate the time” type of controls) in order to activate all the other components of the product. After pressing the play button, the
right/click interactive menu of each component should also contain the dynamic/run-time information provided by the other software components of the product. As a “nice-to-have”

feature, the menu should contain an “Open Shell” button that allows to open a shell/ssh window where the user can directly send commands to the component.

Based on the topology, a background software component should be able to extract the distance of each device from the base station and communicate all the characteristics provided as input (number, type, distance, OS image file, etc.) and the “play/time” controls to the other software components of the product via e.g. REST/JSON APIs.

Type of the Project:

The development is expected to be a “local” web service, that can be displayed either in a desktop wrapping app, or in a browser. The development should be “responsive” and be able to allow the development of mobile/tablet apps in the future.

Brief Info of the Customer:

Customer Name & Surname

Customer e-mail

NOTES:

As a company, we are expecting to get the code developed by the students and using it for research/demonstration purposes. The code will NOT be used for any commercial purpose. Furthermore, we are expecting students to use self-made or open-source components that use GPL-type of licensing. That is not the code that we normally use in our (closed) products. This should serve as a guarantee for the students that their work will not be commercially exploited without their consent and/or awareness. **Inbox for Job Postings in Academia: JobsInAcademia**

Short Description:

This application will ease the process of searching for academic job postings. Typically, during a job search period, people visit many jobs posting websites and subscribe to email alerts to look for appropriate job postings. Due to not remembering all the checked job postings, people may visit the same job posting pages multiple times, which creates headaches and time loss. JobsInAcademia application will make this process easier.

In this application, it is expected to have an inbox-like structure in which the user can read, mark, label, and search the job posts that are extracted from given sources/pages. Each single job posting item (from the sources) should correspond to a unique job item in the inbox of the application, i.e., the application will not retrieve the same item multiple times. User should be able to mark/separate the posts for which s/he considers applying or already applied.

Major Academic Job Posting Sources:

- https://chroniclevitae.com/jobs/position_types/1
- http://www.jobs.ac.uk/
- http://www.academickeys.com/all/choose_discipline.php?go=find_a_job
- http://cra.org/ads
- https://www.higheredjobs.com/search/advanced.cfm?Keyword=

Each source should have a wizard for filtering user’s job search that will be done, most probably, just once. There should be pause, restart, and reset option for determining the status of the user. If user finds a job s/he
may pause the program’s searching status or similarly if a user starts to look for jobs after a long

period of time s/he may choose to reset all configurations and continue with a fresh start.

Type of the Project: Desktop App

Brief Info of the Customer:

Customer Name & Surname

Customer e-mail

Online Trading Portal

Short Description:

We need a software program to create a trading portal between trusted peers. Before the invention of money, people were exchanging their stuff with their needs. For example, one can give a bucket of apples to get a chicken in the bazaar. In time, people start to use money and give the worth of the item to the seller which named buying. So, the value of the thing is considered as a sum of money. But, somehow, this worth can be unsteady depends on the needs. We might not have enough money to buy a chicken, on the other hand, we might have a bucket of apple which has almost the same value. In that case, in the current system, we need to switch the apple to money first and then we are able to buy a chicken. This process adds some bureaucracy and extra works. Even all of the world uses the money system; we want to reanimate the trading process.

The system will collect tradeable items, and the thing can equal with it from people. For example, I want to give a computer and get an Xbox. In that case, the tradeable item will be the computer, and Xbox will be equal to this computer. The system will find someone who has Xbox and wants to trade it with a computer. Thus, these two guys can exchange their items with each other. In addition to direct process, with the help of IT technologies, we also want to provide indirect trading as well. Let's assume there is no one with Xbox who wants a computer. But there is a person who wants to swap Xbox with PS. Also, there is another person with PS who wants a computer. In that case, I can trade the computer with PS and then exchange that PS with Xbox which is called indirect trading.

At the end of this project, we would like to have an online portal to trade items among people who do not know each other.

Type of the Project:
We need an online portal that also allows people to manage their trading on the

smartphone. **Brief Info of the Customer:**

Customer Name & Surname

Customer e-mail

Cryptocurrency Report

Short Description:

Our Institution focuses on following cryptocurrency trends. There are some well-known currencies like bitcoin, Ethereum, ripple, etc. However, in the big picture, there are more than 1300 cryptocurrencies in the market. So, to find a trending coin becomes like looking for a needle in a haystack. We realize that we need an automation system that can browse as many as currencies and provide several reports that might help us to make some better investments in developing coins.

There are a couple of websites providing statistics for cryptocurrencies. Some of them are public, and others are private, so interested people need to pay an amount of money to reach this information. We want to
provide a system that will be used in the institution, and then we want to create a portal to post our reports, as a next step. Basically, the system will collect the general information and the current market values from third-party websites. Then, the system will create demanded reports. Since the cryptocurrency system is still growing up, we want this system as much as functional, modular, and dynamic. For example, our team can add some additional reports quickly after all. Currently, we need to get reports like (i) the average value of a cryptocurrency, (ii) the most gained cryptocurrencies, (iii) estimation to invest a new currency.

At the end of this project, we would like to have an online tool to create reasonable reports on cryptocurrencies.

Type of the Project:

We need a web interface to see our reports and post some of the reports.

Brief Info of the Customer:

Customer Name & Surname

Customer e-mail

Namaz Vakitleri Messenger Bot

Short Description:

Namaz Vakitleri is a daily salah time information channel

- Users share their location information or choose a city
- According to the shared location information or chosen city, bot sends daily salah time information ● Users can set notification for each salah time
- Users can read all the suras, when they write the name of the sura they

want to read **Type of the Project:**

Backend web (Facebook Messenger Chatbot)

Brief Info of the Customer:

Customer Name & Surname

Customer e-mail

NOTES:

Important Points of the Project:

- Bot should be universal - Salah times should be calculated for each region with their own time zone
- Bot should be multilingual - For now option for English and Turkish are enough & In the future any language option should be implemented easily into the chatbot
- Report interface should be detailed and visualized - Half of the project is about reports

and how it delivered, so we need a dashboard to monitorized all data.

- For changing images in the channel without any development required, a dashboard interface is must need.