## Recruitment – Case Technology

**(Technical) Introduction**

During this case you will develop a small application that imports data from a csv file and visualizes it. For the back-end you can use either python or Golang. The back-end will consists of only a server and not a database as will import the data from a csv file. For the front-end part you will use Vue.js. Vue is easy to get started with. Even if you have never worked with Vue you should be able to pick-up the basics needed for this case very quickly. For the assignment you have 72 hours. At the end you hand-in your application by sending us a zipped file with your code.

**The Case**

A leading European internet company (MInternet) has recently noticed that an increasing number of their customers are leaving. They want to get a grip on why this is happening and start to prevent it using AI. This algorithm will predict which of their customers are most likely to churn and will give insights into why they are leaving. The end goal is to create an application where MInternet can observe the predicted likelihood of churn per customer and take interventions with them through the application. The first step in this process is for them to gain an understanding of how their data looks like through an explorative data module in the application.

You will work on an MVP of this explorative data module that focuses on visualizing their data. MInternet wants to be able to see an overview of the data in a table as well as see a visualization of this data in a chart next to it. The client wants to be able to filter the data selection on segment to only show the data for the selected segment in the table and chart. You are free to choose what part of the data you want to visualize and what chart you want to use for this. Think about what would create the most excitement when showing your MVP to MInternet!

An additional wish from MInternet (a ‘nice-to-have’) is to able to sort the data in the table on the amount of complaints made per customer. Of course you can take this case, especially the front-end part, to all the extremes you want. We encourage you to focus on the table, chart and filter option and not focus on headers, sidebars, footers. A working implementation is more important than the overall look-and-feel of the application.

For the back-end part we want you to setup a simple server that runs your app on port 5000 shows your front-end page on the main route (‘/’). Upon loading the page the data should be read from the csv and send to the front-end as a JSON. The csv is included and is called churn\_case\_data.csv

After finishing the case, please answer the following questions:

1. Which language did you pick for the back-end and why? Was there a technical reason for your choice, do you have more experience with one or the other etc.
2. Have you worked with Vue before? What was your experience in working with Vue for this case?
3. What type of chart did you choose for your visualization and what part of the data did you visualize? Argue your choices.
4. MInternet wants you to operationalize your app and run it in their cloud. How would you do this when you are free to use any cloud provider and service you want.
5. Do you have any feedback regarding the case? Was everything clear? Is there anything else you want to clarify about your code?

**How to hand-in the results?**

Send an e-mail to [TalentIL@micompany.co.il](mailto:TalentIL@micompany.co.il) with:

1. Your answers to the questions above
2. A short and precise explanation on how to run your application

* From Github link press on green button clone or download=> download to zip => extract folders
* Enter the backend folder and run on cmd (command Line) `npm i `
* Run on the command line ‘run flask’
* Enter the MIenthernet folder and run on cmd (command Line) `npm i `
* Run on the command line ‘npm start’
* On the web (chrome for example) get to page <http://localhost:8080/#/>

1. A zipped file with your code (or a link to a public git repo?)

* https://github.com/shaniBensal/csvDataVisualisation

Answers:

1. I chose Python for the Backend language because it is more popular, and with higher demand on the market comparing to Golang. No experience in my background to any of them.
2. In last August I finished ‘Coding Academy` Bootcamp, there the main framework we worked on was Vue, so most of my projects where in Vue and some in React.
3. Scatter chart is a grate way to visualize the relationship between two variables and show the distribution of every population (between and inside each segments). Since Mienthernet wants to check the reason of customer leaving I think it’s a good thing to check if there is connection between the variables or the customers.
4. I would choose AWS S3 of Amazon since its global and belong to a big company so there is a small chance it collapses. In addition, it’s widely used and has a very high capacity.

To upload the App to the cloud I need to open AWS account, create Bucket S3 container and upload the app to this bucket.