ASSIGNMENT - CLOUD PLATFORM ENGINEER

As mentioned during the first call, next interview will be a technical use case. We would kindly ask you to work on this ahead of the next interview. Also, it would be great if you could send us your solution/ideas before the interview, so that we can review it.
The goal of this assignment is not to develop a perfect solution, but to get a better understanding of your skills and experience in the Cloud and Software Engineering field as well as see how you approach certain questions and challenges.
If you have any questions regarding the assignment, please don't hesitate to get in touch with us at any time.

General:

- You can use any programming language (our recommendation is Python) or design pattern
- The solution should be flexible, stable and scalable as well as ensure a good code and architecture quality (we want to bring this into production as a next step)
- We don't expect you to spin up any costly machines in the cloud or elsewhere to process Gigabytes or Terabytes of data or showcase infrastructure
- Unless stated otherwise, you can use any tool from one of the major cloud providers or any other system that you like (our preference is StackIT, Azure or GCP)

Introduction:
Imagine we are running a global business operating taxis in major cities of the world, in total its more than 11.000 cars worldwide. Our taxis are operating 24/7/365 and complete small or large trips throughout the day. From our headquarters we have to ensure many things in order to run the business, e.g. we have to ensure receipts are generated for every trip, our management can review various metrics from the trips (e.g. revenue per city, length of the trips, ...), we can prevent fraud or plan where we place our taxis within the city throughout the day.

Assignment:

- Architecture:
    - Design an architecture that allows us to collect, process and analyze data from our taxi operation as well as send data back to individual cars and communicate with our users
- Automation
    - Develop a script to automate the setup and maintenance of your architecture. Its ok if its only parts of it or 2-3 components and not the whole architecture. We should be able to rollout the components but also update the whole or individual parts of it
- Data Exfiltration and Infiltration
    - Think about how to secure the data we are collecting for this use case and the platform in general. What tools and approaches can be used to minimize the risk of unwanted Data Exfiltration or Data Infiltration.
- Vision
    - Create a vision for the future of our taxi company data platform, what are going to be important pillars and elements that we should focus on in the next 2-3 years.