

## **Backend Developer Assignment**

### **Overview:**

You're a backend developer working for a startup named ABC Co. They specialize in data analysis and visualization tools. ABC is developing a new feature that logs the usage of the tools offered by the platform. For example, ABC would like to know things like: which user is using a tool, which tool they are using, the time at which the tool was used, etc. Your task is to create a key part of this feature.

### **Objective:**

Create a RESTful API using Python, which will serve as a backend for the usage monitoring tool for ABC's developers. The API will interact with MongoDB and should be designed with scalability and maintainability in mind.

### **API Development:**

- Develop a RESTful API that allows users to store and retrieve data analysis records. The API should support basic CRUD operations.
- Implement two primary endpoints: one for submitting new analysis records (POST) and another for retrieving existing records (GET).

### **Database Schema Design:**

- Design a MongoDB schema suitable for storing data analysis records. Each record should include relevant fields given the use case.
- As an optional challenge, provide a conceptual outline of how Neo4j could be utilized for advanced data relationships in this context.

### **Code Quality and Documentation:**

- Write clean, well-organized, and commented code, following best practices.
- Include a README.md file that explains the API's functionality, the database schema, and any necessary instructions for setting up and testing the API.

### **Guidelines:**

The actual deployment of the API or database is not required; the focus should be on the code and schema design. Use Python for API development. You may use frameworks or libraries as you see fit. To be mindful of your time, this assignment should take 1-2 hours to complete.

### **Submission:**

To submit this assignment, please reply to this email with either a GitHub, GitLab, or Google Drive link to your code.

If you have any questions, please feel free to reach out.

*Good luck!*