# UPSKILLS DATA SCIENCE AND MACHINE LEARNING INTERNSHIP

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I would like to provide you with a progress report for my first week in the Upskills UCT Machine Learning and Data Science Internship. The following points highlight the key aspects of my activities and experiences:

### **Training and Orientation.**

During the first week of the Upskills UCT Machine Learning and Data Science Internship, I participated in comprehensive training sessions and orientation programs. These sessions provided valuable insights into the company's operations, introduced me to the team members, and familiarized me with the tools and technologies used in machine learning and data science projects.

#### **Project Assignments:**

I was assigned two projects during the first week. The first project involves selecting the appropriate PS for our further workings and analyzing a large dataset to identify patterns and trends using machine learning algorithms. The second project focuses on the training session of big data and machine learning. I have started gathering the necessary data and conducting initial exploratory data analysis to gain a better understanding of the projects' requirements.

#### **Skill Development:**

Throughout the week, I had the opportunity to enhance my skills in various areas. I deepened my understanding of programming languages such as Python and its libraries, which are commonly used in machine learning and data science. Additionally, I gained proficiency in utilizing libraries and frameworks like TensorFlow and scikit-learn for implementing machine learning algorithms.

#### **Collaboration and Communication**

I actively engaged in team collaboration and communication activities. I participated in daily video streaming where we discussed fundamental learnings and addressed any challenges. We got guidance and mentorship, which significantly contributed to my learning experience.

## **Challenges and Learning Opportunity**

While working on the projects, I encountered challenges related to Problem Statement Selection. All PS are so learnable, elaborative and exploratory that it really takes a lot of time thinking about the perfect PS for my internship during this period of time. However, through research and utilizing online resources, I was able to finalize my PS among these PS. The PS I selected is this:

# **Smart City:** Forecasting of Smart city traffic patterns

#### **Goals for the Next Week**

Looking ahead to the next week of the internship, my goals are to complete the data preprocessing phase for the smart city traffic pattern project and begin training and evaluating different machine learning models. Additionally, I aim to further expand my knowledge of advanced techniques in data analysis and explore concepts such as deep learning and natural language processing.

In conclusion, my first week at the Upskills UCT Machine Learning and Data Science Internship was filled with valuable training, engaging project assignments, and opportunities for skill development. I am excited to continue my journey and contribute to the success of the internship program in the coming weeks.