**Summary of Fellowship at Bytewise Limited March 2023- June 2023**

During the first phase of my fellowship, I acquired proficiency in several important technical skills, including:

* Machine Learning: I gained a comprehensive understanding of machine learning concepts and techniques, which enabled me to develop predictive models and classification algorithms.
* GitHub: I learned how to use GitHub effectively for version control and collaboration with other team members. I created and maintained repositories, branches, and pull requests.
* Python: I learned Python programming language from basics to advanced concepts such as object-oriented programming. I also gained proficiency in using popular libraries like NumPy, Pandas, Matplotlib, and Seaborn for data analysis and visualization.
* During the third month of our fellowship, we focused on understanding and implementing various machine learning algorithms, including logistic regression, linear regression, support vector machines (SVM), k-means clustering, k-nearest neighbors (KNN) and Random Forest.
* During the fourth month of our fellowship, we dedicated our efforts to studying and implementing various aspects of neural networks. Our focus areas included Convolutional Neural Networks (CNNs), Sequence Modeling, Computer Vision techniques, Natural Language Processing (NLP), Object Detection and Localization, as well as Text Generation using the GPT (Generative Pre-trained Transformer) model.

**Projects:**

**Waiter Tip Prediction Using Linear Regression**

The Waiter-Tip-Prediction-Using-Linear-Regression project uses math to guess how much a waiter will get tipped. It looks at things like how much the customer spent, if they smoked, and what day it was. The project uses a statistical method called Linear Regression. The dataset used in the project has numbers and categories about things like the bill amount, tip amount, customer's gender, and when they ate.

[**GitHub Link**](https://github.com/Wasif-M/Waiter-Tip-Prediction-Using-Linear-Regression)

**Predicting Heart Disease with Logistic Regression**

This is a machine learning project that uses logistic regression to predict the likelihood of heart disease based on various physical features. The dataset used in this project contains information on patients such as age, sex, blood pressure, cholesterol levels, and other relevant factors**.**

[GitHub Link](https://github.com/Wasif-M/Predicting-Heart-Disease-with-Logistic-Regression)

**Gene expression levels Calculation Using KKN**

The gene expression levels in the dataset are represented as ratios of the expression of the target gene to the expression of one or more reference genes. This quantitative measure allows for the comparison of the expression levels of different genes in the dataset. The dataset is artificially created to demonstrate the advantages and disadvantages of using KNN for classification.

[GitHub Link](https://github.com/Wasif-M/100-days-Python-coding-challenge/tree/main/Day%2023)

**Car-Data-Evolution-Using-KNN-Model**

The project "Car Data Evolution Using KNN Model" aims to explore the evolution of car data using the K-Nearest Neighbors (KNN) model. KNN is a popular machine learning algorithm used for classification and regression tasks. In this project, we will apply the KNN model to analyze and predict various aspects of car data.

[GitHub Link](https://github.com/Wasif-M/Car-Data-Evolution-Using-KNN-Model)

**Python-Script-to-Fetch-Data-from-an-Open-API-and-Store-in-Excel**

This Python script is designed to fetch data from an open API and store it in an Excel file. It provides a convenient way to retrieve data from an API and organize it in a tabular format for further analysis and manipulation.

[GitHub Link](https://github.com/Wasif-M/Python-Script-to-Fetch-Data-from-an-Open-API-and-Store-in-Excel-)

**100-days-Python-coding-challenge**

The "100 Days Python Coding Challenge" is a self-directed coding challenge that spans over a period of 100 days with the goal of enhancing Python programming skills and knowledge. The challenge involves dedicating time each day to work on coding projects, exercises, or learning resources related to Python.

[GitHub Link](https://github.com/Wasif-M/100-days-Python-coding-challenge/tree/main/Day%2023)