Syllabus Mini Bootcamp Python for Data Science
12 – 28 Juli 2024

No	Topic	Subtopics
1	**Introduction to Data Science**	Pengenalan Data Science
		Pengenalan Artificial Intelligence
		Data Science Project Stage (Business Undestanding, Data Understanding, Data Preparation, Modelling, Model Evaluation)
2	**Python for Data Science**	Python Introduction
		Variable, Operator, Built In
		Package, Read-write txt files
		Control Flow Statements
		External Package
3	**Statistics for Data Science**	Statistik Deskriptif
		Statistik Inferensial
		Statistik Probabilitas
		Statistik Komputasi
4	**Extensive use of the NumPy Library**	Pengenalan library NumPy
		Membuat NumPy array dan Perhitungan matematis dengan NumPy (sqrt, trigonometry, ceil, floor, log, dan lain-lain)
5	**Extensive use of the Pandas Library**	Pengenalan library Pandas
		Membuat dataframe dan series, statistik deskriptif dari data tabular (std deviation, mean, min, max, mode, median, dsb.), dan transformasi tabular
		Data Manipulation with Pandas (Preparation, Preprocessing & EDA)
6	**Data Visualization with Matplotlib/Seaborn**	Pengenalan library Matplotlib & Seaborn
		Menampilkan visualisasi data (scatter plot, bar plot, line plot, histogram, area plot, pie plot, heat map, distribution plot, box plot dsb.)
7	**Machine Learning**	Machine Learning Lifecycle
		Machine Learning Algorithm (Regression, SVM, Naïve Bayes, Decision Tree, KNN, K-Means)
		Model Training & Model Evaluation
		Hyperparameter Tuning
8	**Final Project Data Science**	Project for data science using machine learning