■ 5-Day Data Science with Streamlit Bootcamp

Day 1 – Python & Data Science Foundations

- Refresher on Python for Data Science (NumPy, Pandas basics)
- Working with datasets (CSV, Excel, APIs)
- Exploratory Data Analysis (EDA) – describe, filter, groupby
- Hands-on: Load a dataset (e.g., Titanic or Sales data) & perform basic EDA
- Mini Project: Build a simple Streamlit app to upload a CSV and display basic stats & tables

Day 2 – Data Visualization with Streamlit

- Data visualization in Python (Matplotlib, Seaborn, Plotly)
- Integrating visualizations inside Streamlit
- Using interactive widgets (slider, selectbox, multiselect)
- Hands-on: Interactive charts (bar, line, scatter)
- Mini Project: Build a Streamlit dashboard to explore COVID-19 or stock market data interactively

Day 3 – Machine Learning Basics

- Intro to Scikit-Learn (regression, classification)
- Data preprocessing (scaling, train/test split)
- Training a simple ML model (Linear Regression, Logistic Regression, Decision Tree)
- Evaluating models (accuracy, RMSE, confusion matrix)
- Mini Project: Streamlit ML app where user uploads dataset, selects model, and sees predictions

Day 4 – Advanced ML & Model Deployment

- Feature engineering & cross-validation
- Random Forests & Gradient Boosting overview
- Saving/loading ML models with joblib / pickle
- Streamlit forms for user input (predict house price, customer churn, etc.)
- Mini Project: Deploy a trained ML model inside a Streamlit app

Day 5 – Capstone Project + Deployment

- End-to-end project: choose dataset → clean → visualize → train model → deploy app
- Add polish (themes, layout, navigation, multipage apps)
- Deploy Streamlit app on Streamlit Cloud or Render
- Capstone Project: Build & deploy a complete Data Science + ML Dashboard with Streamlit

■ Outcomes

- Understand data handling, visualization, and ML basics
- Be able to build & deploy interactive data science apps
- Have a portfolio project live online (good for LinkedIn/GitHub sharing)