

Enterprise AI Tools & Applied Data Science Internship

(15 Days | Practical-Oriented | Industry Ready)

INTERNSHIP SYLLABUS

INTERNSHIP OBJECTIVES

- Understand enterprise-level AI & Data Science workflows
- Work with real-world datasets & business problems
- Use industry AI tools (AutoML, BI, ML platforms)
- Build end-to-end data science projects
- Prepare students for corporate roles & research projects

TOOLS & PLATFORMS COVERED

- Python, Pandas, NumPy, Matplotlib, Seaborn
- Scikit-Learn, AutoML tools
- Power BI / Tableau
- Google Colab, Jupyter
- SQL, Excel for Analytics
- Enterprise AI platforms (overview + practice)

DAY 1 – Introduction to Enterprise AI & Data Science

- What is Enterprise AI?
- AI vs ML vs Data Science vs Analytics
- Industry use cases (Banking, Healthcare, Retail)

Practical

Setup Python, Anaconda / Colab

First Data Science notebook

Outcome

Clear understanding of enterprise AI workflow

DAY 2 – Python for Data Science (Enterprise Focus)

- Python basics for analytics
- Data types, loops, functions

Practical

Business data calculations

KPI computation using Python

Mini Task

Revenue, profit analysis script

DAY 3 – Data Handling with Pandas & NumPy

- DataFrames, Series
- Handling missing values
- Data cleaning strategies

Practical

Clean real enterprise dataset

Handle duplicates & nulls

DAY 4 – Exploratory Data Analysis (EDA)

- Statistical summaries
- Patterns & trends
- Outlier detection

Practical

EDA on sales / HR dataset

Business insights generation

DAY 5 – Data Visualization for Decision Making

- Importance of visualization in enterprises

- Choosing correct charts

Practical

Matplotlib & Seaborn charts

Executive-level visual reports

DAY 6 – SQL & Excel for Business Analytics

- SQL basics for analysts
- Excel analytics features

Practical

SQL queries on enterprise DB

Excel dashboards & pivot tables

DAY 7 – Introduction to Machine Learning

- Supervised vs Unsupervised learning
- Business problem mapping to ML

Practical

First ML model (Linear Regression)

DAY 8 – Classification Models for Enterprise Use

- Logistic Regression
- Decision Trees
- Use cases (Fraud, Churn)

Practical

Customer churn prediction model

DAY 9 – Model Evaluation & Optimization

- Accuracy, Precision, Recall
- Confusion matrix

Practical

Improve ML model performance

Feature selection

DAY 10 – AutoML & Enterprise AI Tools

- What is AutoML?
- Enterprise AI platforms overview

Practical

AutoML model training

Compare manual ML vs AutoML

DAY 11 – Business Analytics with Power BI / Tableau

- BI tools in enterprises
- KPI & dashboard design

Practical

Build Power BI dashboard

Business storytelling with data

DAY 12 – Applied Data Science Case Studies

- End-to-end project workflow
- Data → Model → Insight → Decision

Practical

Case study: Sales Forecasting / HR Analytics

DAY 13 – Capstone Project Development (Phase 1)

- Problem statement finalization
- Dataset selection
- Data preprocessing

Trainer Guidance

Project architecture review

DAY 14 – Capstone Project Development (Phase 2)

- Model building
- Visualization
- Insight generation

Practical

Business recommendations based on model

DAY 15 – Project Presentation & Enterprise Readiness

- Project demo
- Viva & evaluation
- Resume & interview guidance

