DS

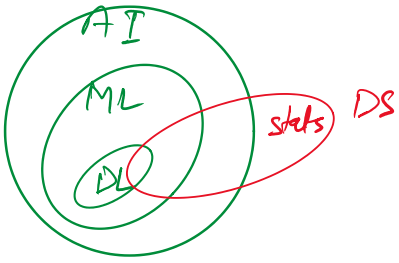
01 July 2025 16:28

Problem Solver

DS → Languages
- SQL
- Python

DA → Tools
- Excel
- Power BI

DS → study of data



DA → what has happened ?
What is happening ?

DS → What could possibly happen ?
extends What could be done ?

Stats

DA → Descriptive
- Describe
- Result

Analyst

DS → Inferential
- Infer / Conclude
- Exit Polls

Engineer, scientist

Analyst

Engineer, scientist

- Statistics
- Tools / languages
- Communication

} =

Roadmap

DS with AI

→ Python Programming
→ Python for data Analysis
→ SQL
→ Power BI + Excel
} (Analyst)

→ Statistics (Advanced)
→ Machine Learning
→ Deep Learning
→ Natural Language Processing
→ Gen AI
→ AI Workflows
→ Agentic AI

Python → High level programming language
→ Interpreted language
↳ translator — Compiler (all # once)
Interpreter (line by line)
→ Multipurpose language

→ Multipurpose language
  - Web Development
  - Data science

→ Open source

→ Platform Independent

→ Vast collection of libraries

→ Paradigm : Procedural, Functional, OOP

Python Environment
- Local : VS code, Anaconda
- cloud : Google Colab, Kaggle

Anaconda → IDE (Integrated Development Environment)

↳ Jupyter Notebook

↓

Cell

- Markdown (Text) or Documentation
- Code (Actual coding)