Introduction to "Data" (Practice)

in Python

Buzzwords (& Concepts)

Data Science

Big Data

Machine Learnig
→ Supervized

Algorithms

Fuzzy Logic

Data Frame

Data Mining

Self-Driv Cars.

AI

Neural Networks

Deep Learnig

Software Engineerig

Why Python for this area?

History:

90s — Invented Edu.

Mid 90s — Research Sci

↓

→ Data + Software

00s — Google

↓

"Digital Transformation"

(*)

- Open Source
- Easier to learn.
- Wide spread

& covers all "data" areas.

Shilli $_{100}$ ↑

Pyman

Saver

Y_r

Aside : Modern Dig. Transf.

Excel, Save SQL ... SQLserver

decks.

Analysis

S.Fy

DBA

Python
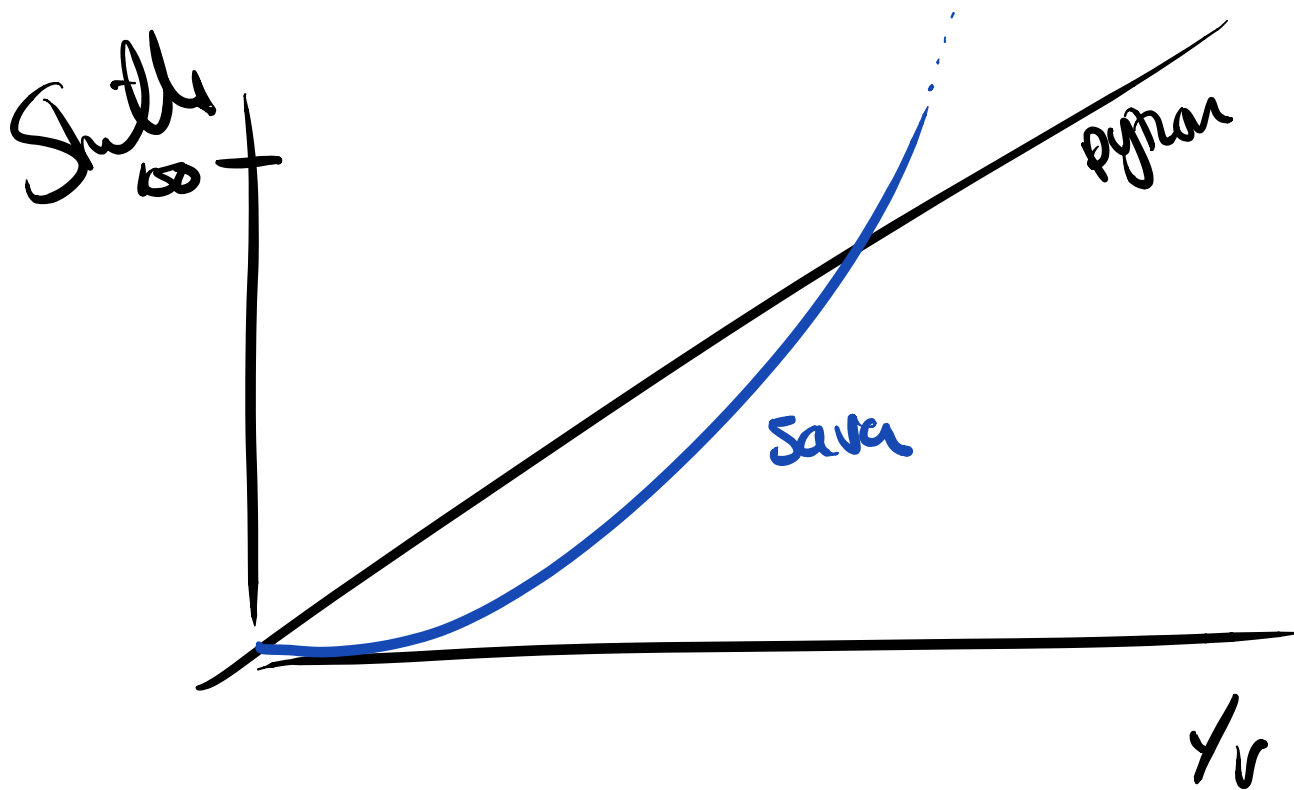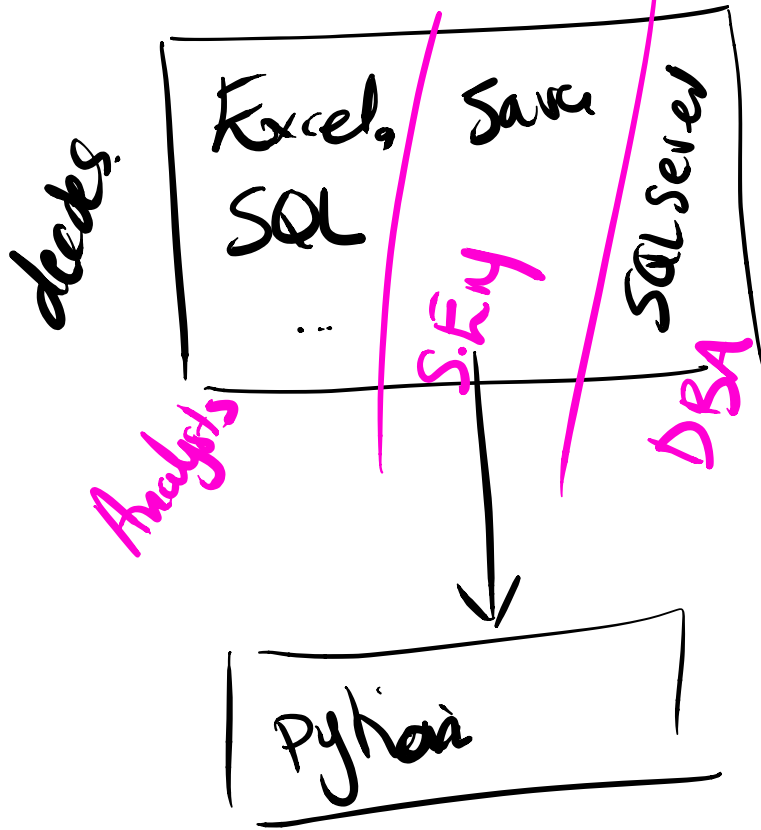
Traditioned
Non-pr.
Analyties

"de-silo"

ie. ↑ Collaboration.

New World

D. Analyst

D. Scientist

S. Engineer

Python
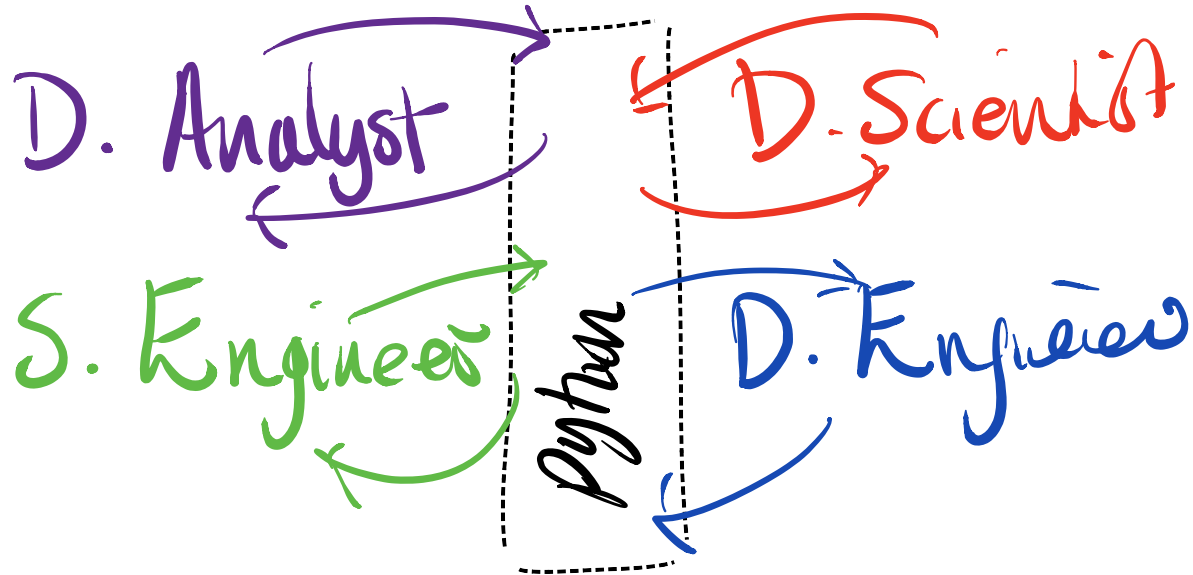
D. Engineer

Data Analysis vs. Science

Descriptive
Reportive
"Factual"
Specialized
↳
"known Problems"

Inferential
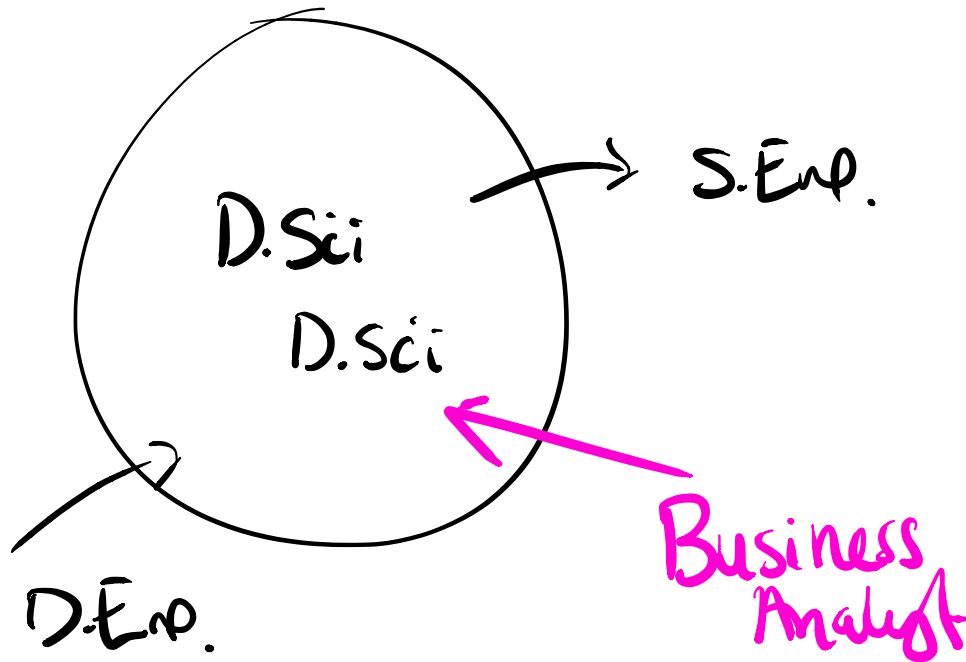**Prescribing**
"Uncertain"
General
"Open Problems"

Software Engineers vs. Data Eng.

Application Development

System Architecture

↳ **Automation**

user input & interaction
OR 'device' I/O

Data Architecture

Data Automation

↓

Ingestion
Processing
Storage ...

Data (Science) Teams

Most problems require mixed roles.

D.Sci
D.Sci

→ S.Eng.

D.Eng.

Business Analyst

ie. "Domain Specialist"

Skills

Technical   Mindset
Behavioral   Knowledge
Attitude

Mathematics   Algorithms   Programing
Statistics   Data Querying   Data Formats

Logical & Analytical   Clarity   Communication
Thinking
                                        Domain Know.

Problem Solving   Persistance

Creativity
Curiosity   Disagreeable.
                       => Refute "traditional
                                   thinking"
              Scepticism

Skill

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Software Eng

Project Manager

"classic" D. Scientist 2

→ "Actual" D/S.

Prog. Alg. Query Formats Processy Maths Stats Problem S. Curiosity Creativity Communction Domain K. —— Resistance Scepticism

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