Analytics in PRACTICE

1 Analytics Context — 5 mins

2 Getting Started — 10 mins

3 Taking it Further — 5 mins

4 Question(s)? — 10 mins

4th Industrial Revolution

- Demand for Digital
- Internet of Things
- Cloud
- Data & AI tools
- Evolving Business

Impact to people that work with data

- Improved capture of data
- Expanded capture of data
- Cheaper storage and compute
- Improved specialized tools
- Demand to innovate & experiment

Analytics as a grouping of quantitative decision sciences

Operations Research **as part of Analytics**

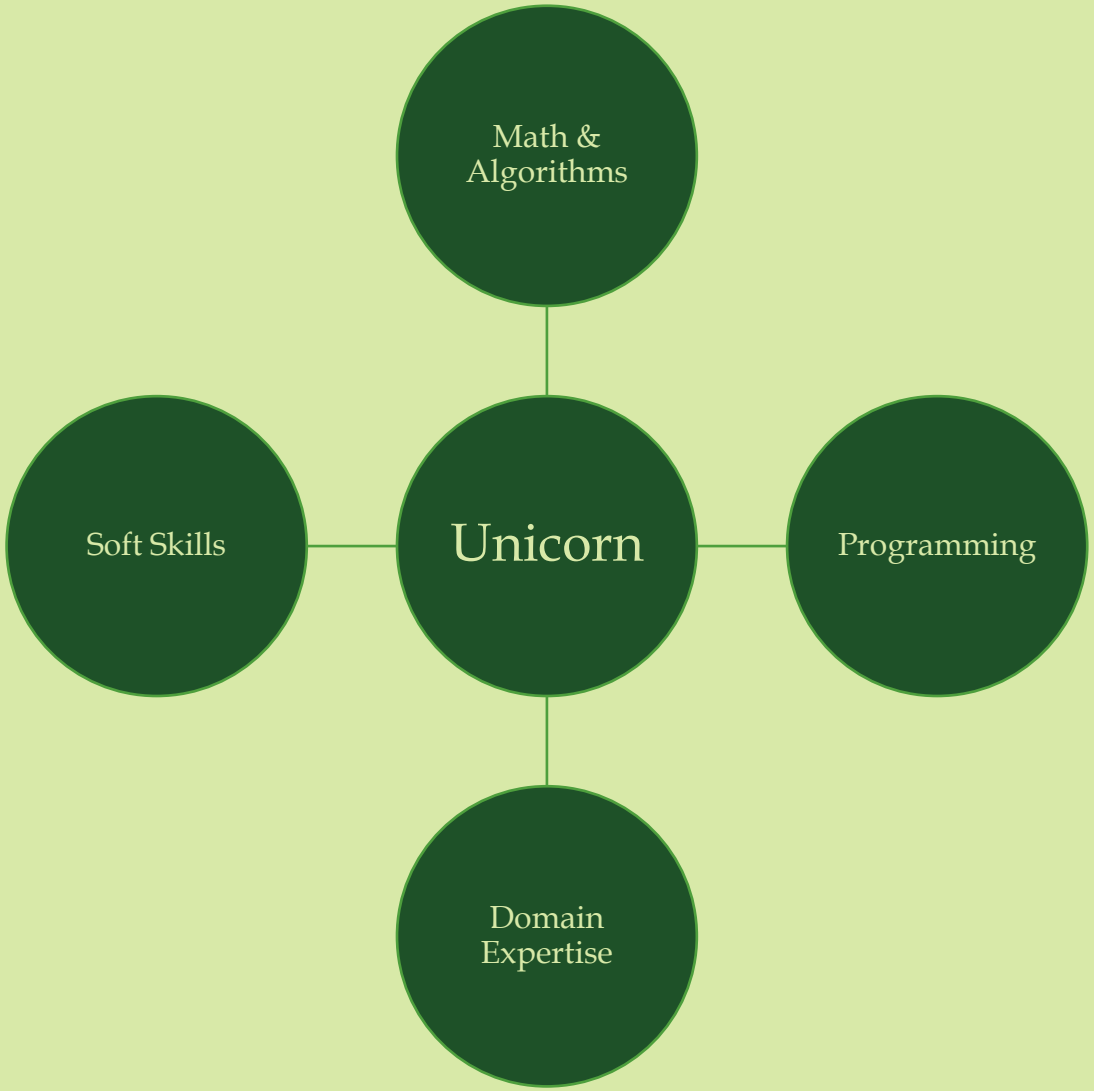
Operations Research (O.R.) is a discipline that deals with the application of advanced analytical methods to **help make better decisions** (Informs.org)

What happened?	Why did it happen?	What could happen?	What should we do?
Descriptive	**Diagnostic**	**Predictive**	**Prescriptive**
Statistical Analysis, trends, benchmarks, dashboards & visualizations	Statistical Analysis, Data Mining, Correlation , time series analysis	Statistical Analysis, Regression, Forecasting, Machine Learning	Mathematical Programming, Simulation, Optimization Models

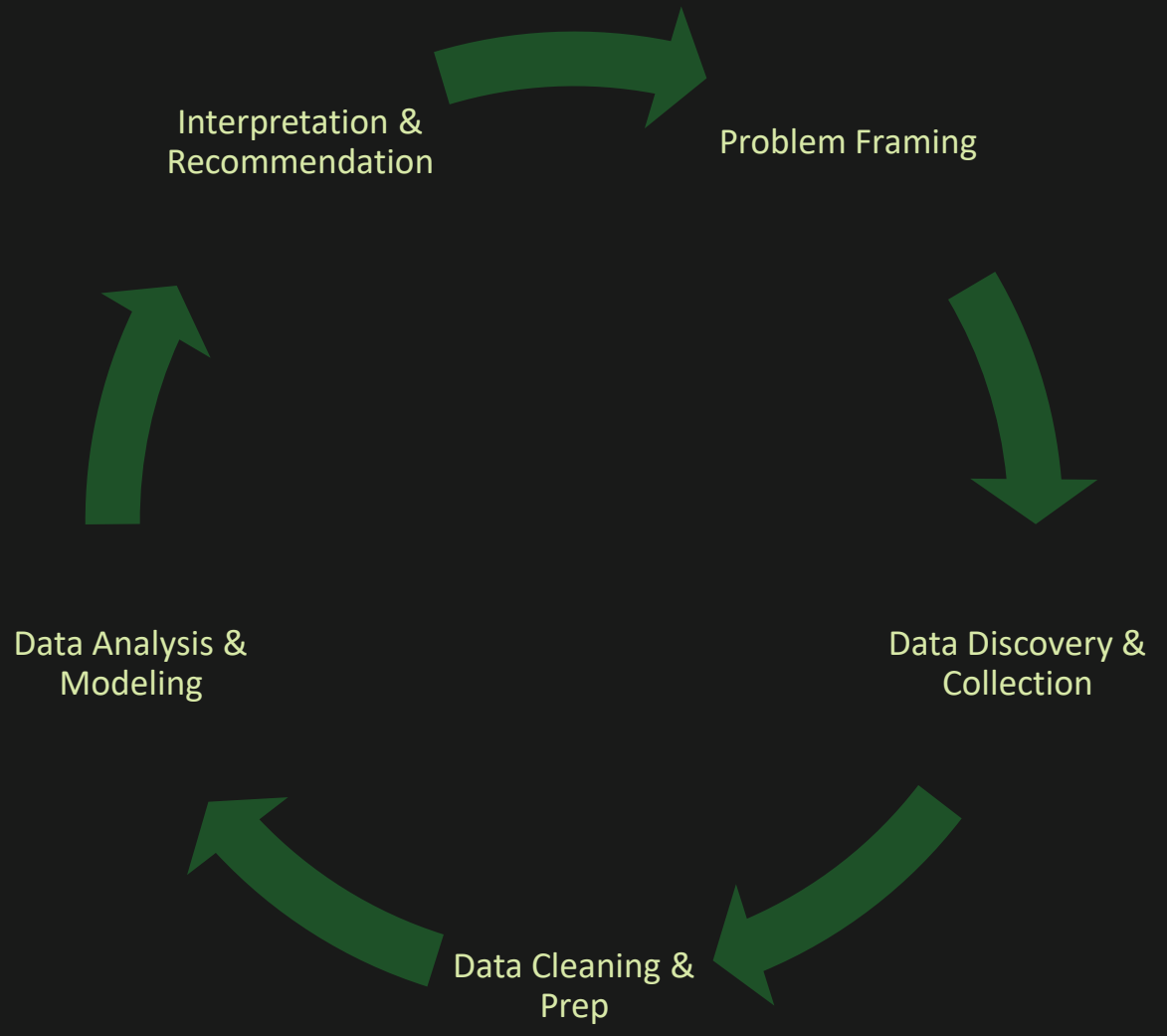
D a t a S c i e n c e

Analytics is the scientific process of **transforming data into insights** for the purpose of making better decisions (Informs.org)

Getting Started with Analytics



Analytics Workflow



Common Problems Handled in Analytics

Data Science

- Data Exploration
- Feature Engineering
- Data Visualization
- Classification
- Regression
- Forecasting
- Clustering, Outlier Detection, & other Algorithms

Operations Research

- Optimization
- Simulation
- Network Modeling
- Clustering, Outlier Detection, & other Algorithms

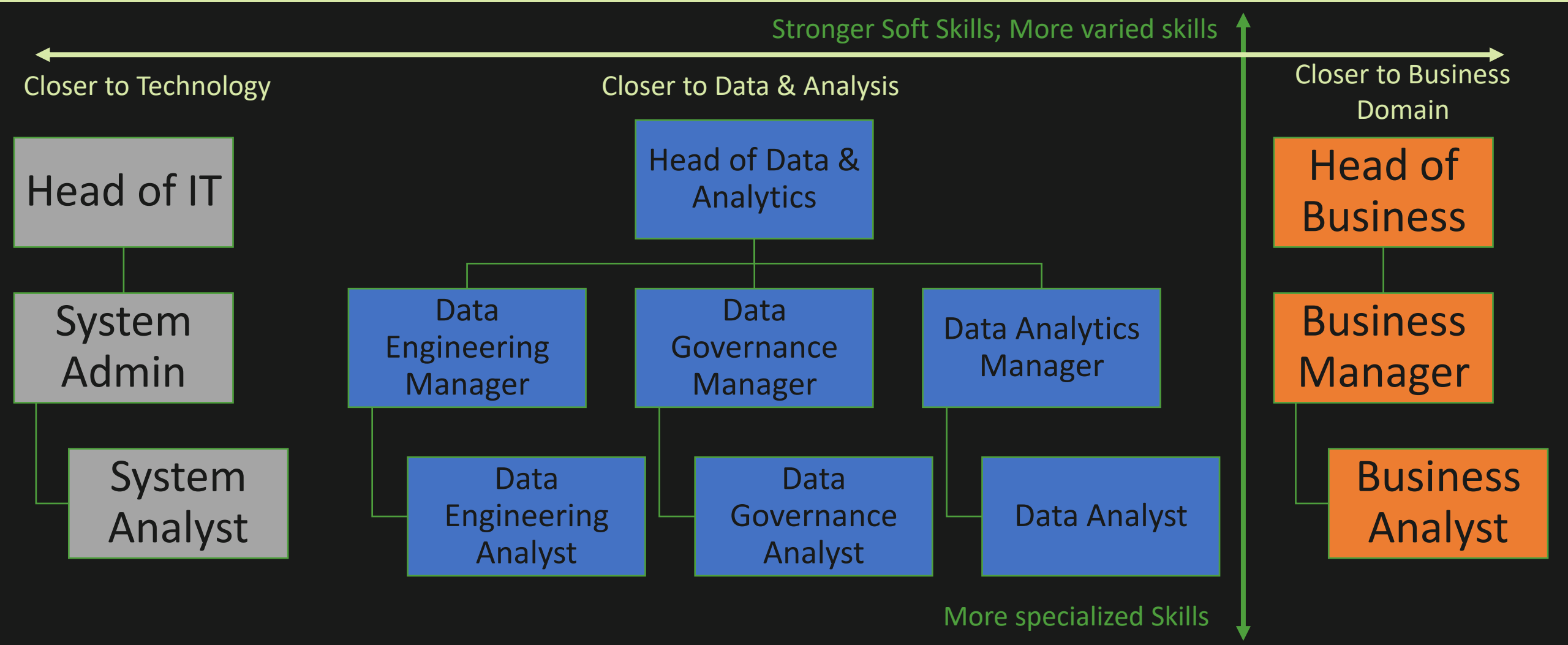
DEMO – NORTH POLE ANALYTICS

NOTE: THIS IS FOR DEMO PURPOSES ONLY

Common Challenges in Analytics

- Problem Framing
- Data Quality
- Limitation of tools
- Solution scaling
- Operationalization
- Communication

Different Roles & Careers in Analytics



NOTE: The names may potentially be different per organization

How can you take this further?

Solve

Find simple problems you can work on that you have access to data.
Build your confidence.

Specialize

Focus on one thing at a time. One tool, domain, problem, & technique.
Build your mastery.

Improve

Follow blogs, watch videos, network, & look for mentors.
Build your hunger.

Begin by:

1. Download Anaconda/ Python @ https://www.anaconda.com
2. Try the codes @ https://github.com/Ogbinar/ORSP01
3. Add me in LinkedIn @ https://www.linkedin.com/in/ogbinar

Start practicing Analytics TODAY!