**Intelligent Automation Track:**

The goal of this track is to develop hands-on experience to become a Data Analyst, Data Engineer, Data scientist, and AI/ML intelligent automation expert. It will build the foundation for future innovation in this subject within your company as an Intrapreneur and an Entrepreneur.

1. **Introduction to Data science** – Moneyball, Voter Turnout, and Engineering Solutions
2. **Statistics, AI, Machine Learning, Deep Learning, Software engineering for Data Science** – NumPy, PyTorch, Jupyter, and Apache Spark
3. **Structure and output of a Data Science Project / Experiment**
4. **Defining Success -** Four Secrets of a successful Data Science Experiment
5. **Data Science Toolbox –** Big data, Datasets, Stat Models, Refining data, Training models, Dataflow diagrams level 0-4, validation and deployment
6. **Data Science for Startup, SME, and Large Organizations**
7. **Common Challenges and difficulties for Data Science –** Interaction and internal
8. **Managing Data Analysis** – Forecasting, replenishment, and optimization
9. **The Data Analysis Iteration** – HLD, data structures, data flow and predictive analytics
10. **Epicycle of Analysis** – Process and data flow diagrams
11. **Exploratory Data Analysis and Modeling**
    1. What Are the Goals of Formal Modeling?
    2. Associational Analyses
    3. Prediction Analyses
12. **What You’ve Gotten Yourself Into**
    1. Data double duty
    2. Multiplicity
13. **Randomization versus observational studies**
    1. The Data Pull is Clean
14. **The Experiment is Carefully Designed: Principles**
    1. Causality
    2. Confounding
15. **The Experiment is Carefully Designed: Things to Do**
    1. A/B testing
    2. Sampling
    3. Blocking and Adjustment
16. **Results of the Analysis Are Clear**
    1. Multiple comparisons
    2. Effect sizes, significance, modeling
    3. Comparison with benchmark effects
    4. Negative controls
17. **The Decision is Obvious**
    1. The decision is (not) obvious
    2. Estimation target is relevant

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