Data Analysis with Machine Learning Program Curriculum:

A Coding Bootcamp is not a typical training program. It's intensive, immersive, and completely hands-on. It requires commitment and sheer dedication from the candidates. Our aim is to help candidates learn programming with a focus on how to build products.

Code For India Foundation provides candidates with all the resources i.e learning material, infrastructure, flexible access to campus, world-class instructors & mentors to help them become great product developers.

While the focus is on coding, what we really work on is picking the ***"art of learning new things."***

Week 0-2:
Technical Orientation, Computer Number System for Programming: Binary, Octal, Decimal, Hexa-Decimal Number systems, Binary Arithmetic. Complements, Floating Point Numbers Conversion, ASCII Interpretation.

What is UNIX?, UNIX architecture, Basic Linux Commands, man pages, Linux Directories, Absolute & Relative paths, ls commands. Linux Files, File contents, Shell history, File Globbing, Linux Process - Process management, I/O redirection, Filter commands, Linux SoftLinks & Hard Links. 3. Linux File permissions, Command Line Text Editors, CRON Jobs(Writing automated and scheduled UNIX Scripts, Introduction to Git & GitHub.

Week 3-5:
Python Programming fundamental to advanced: Basics of Python, Python Data Types, Object-Oriented Programming, Computational Complexity,

Week 6-9:
Python Libraries for Data Science: NumPy For Numerical array Management, Pandas For Dataset Management, Matplotlib & Seaborn For Data Visualisation, Scipy, Scikit learn, Maths for Data Science, ML, and AI: Descriptive Statistics - Understanding Types of Data, Experiencing Measures of Central Tendency, Experiencing Measures of Dispersion, Understanding Random Variables, Concepts of Probability Distributions, Understanding Concept of Ranges, Understanding Tests for Association, Concepts of Standard Normal Distribution, What is Distribution Functions, Exploratory Data Analysis: Data Preprocessing - Pipeline ideas, Data Analytics, Cycle ideas, Data Inputting, Data preparation, Data Visualisation.

Week 10-13:
Machine Learning: Introduction to Machine Learning, Applications of Machine Learning, Deep Diving of Machine Learning, Supervised Machine Learning, Respective Performance Measures**,** Regression, Types of Regression, Decision Tree, Random Forest, Respective Performance Measures, Unsupervised Machine Learning, Agglomerative, Data Dimensionality, What is Reinforcement Learning, Advanced Machine Learning.

Key Highlights:

- Building your own milestone projects & personal portfolio
- Data Munging (Mini- Hackathon), AptitudeClassification(Mini-Hackathon), Author Identification(Mini- Hackathon)
- Voice commands-based food ordering system(Hackathon) and many more projects using Kaggle competitions.
- Learning through internal hackathons & Tech-Talks
- Soft Skills Training and Interview preparation.