**Master Program in Data Science**

**Month 1: Introduction to Data Science and Python**

Week 1-2: Introduction to Data Science

* Overview of data science and its applications
* Role of a data scientist
* Ethical considerations in data science

Week 3-4: Programming with Python for Data Science

* Introduction to Python programming
* Data structures and libraries (NumPy, Pandas)
* Basic data manipulation and analysis

**Month 2: Data Exploration and Visualization**

Week 1-2: Exploratory Data Analysis (EDA)

* Descriptive statistics
* Data cleaning and preprocessing
* Handling missing data

Week 3-4: Data Visualization with Matplotlib and Seaborn

* Introduction to data visualization
* Creating various types of plots and charts
* Storytelling with data

**Month 3: Machine Learning**

Week 1-2: Introduction to Machine Learning

* Basics of machine learning
* Types of machine learning algorithms
* Model evaluation and selection

Week 3-4: Supervised Learning Algorithms

* Linear Regression
* Decision Trees and Random Forest
* Support Vector Machines (SVM)

**Month 4: Advanced Topics, Capstone Project, and Final Review**

Week 1-2: Unsupervised Learning Algorithms

* Clustering techniques (K-Means, Hierarchical)
* Dimensionality reduction (PCA)

Week 3-4: Advanced Topics and Capstone Project

* Natural Language Processing (NLP)
* Time Series Analysis
* Participants work on a comprehensive data science project

Week 5-6: Final Review and Exam Preparation

* Review of key concepts and techniques
* Practice exams and quizzes
* Final project presentation and evaluation