

## FOUNDATION AI COURSE(30 Days)

Sl. No	Content / Topic
1	<b>Artificial Intelligence Exploring the Future</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
2	<b>Introduction to AI: Definition and Origins</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
3	<b>The Rise of AI in India: A Journey of Innovation</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
4	<b>Subset of Artificial Intelligence (AI)</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
5	<b>The Role of Data in Artificial Intelligence</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
6	<b>Data Cleaning Preprocessing and Visualization</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
7	<b>The AI Pipeline: From Data to Deployment</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
8	<b>The AI Pipeline: From Data to Deployment (Part-2)</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
9	<b>The Future of AI: Exploring Generative AI and Responsible AI</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
10	<b>Applications of AI: A Transformative Journey</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
11	<b>Careers in AI: A World of Possibilities</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
12	<b>Fun Facts and Trivia About AI</b>
	Video Lesson
	Notes Lesson

	Quiz Lesson
<b>13</b>	<b>Leading Companies in AI</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>14</b>	<b>Pioneers and Innovators of AI</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>15</b>	<b>How to Verify AI Information</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>16</b>	<b>Introduction to Machine Learning</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>17</b>	<b>Unlocking Your Potential with AI: A Student's Guide</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson

## **GENERAL AI TOOLS**

Sl. No	Content / Topic
<b>1</b>	<b>Grammerly AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>2</b>	<b>Book Bot AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>3</b>	<b>EssayDone AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>4</b>	<b>Kickresume AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>5</b>	<b>ChatGPT</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>6</b>	<b>QuestionWell AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>7</b>	<b>Teachable Machine</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson

# Applied Artificial Intelligence with 50+ Tools (80 Days)

Sl. No	Content / Topic
1	<b>Types of ML: Supervised, Unsupervised, Reinforcement Learning</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
2	<b>Regression: Linear Regression, Logistic Regression</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
3	<b>Classification: K-Nearest Neighbors, Decision Trees</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
4	<b>Clustering: K-Means, Hierarchical Clustering</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
5	<b>Model Evaluation: Accuracy, Precision, Recall, F1 Score</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
6	<b>Train-Test Split &amp; Cross Validation</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
7	<b>Overfitting vs Underfitting</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
8	<b>Bias-Variance Tradeoff</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
9	<b>Feature Scaling: Normalization, Standardization</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
10	<b>Dimensionality Reduction: PCA</b>
	Video Lesson

	Notes Lesson
	Quiz Lesson
<b>11</b>	<b>What is a Neural Network</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>12</b>	<b>Perceptron and Multilayer Perceptron</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>13</b>	<b>Activation Functionalities: ReLU, Sigmoid, Tanh</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>14</b>	<b>Loss Functions: MSE, Cross-Entropy</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>15</b>	<b>Forward and Backend Propagation</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>16</b>	<b>Gradient Descent &amp; Variants (SGD, Adam)</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>17</b>	<b>Epochs, Batches, Learning Rate</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>18</b>	<b>Overfitting in DL &amp; Dropout</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>19</b>	<b>Introduction to CNNs (used in CV)</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>20</b>	<b>Introduction to RNNs (used in NLP)</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>21</b>	<b>What is NLP?</b>
	Video Lesson

	Notes Lesson
	Quiz Lesson
<b>22</b>	<b>Text Preprocessing: Tokenization, Stop Words, Lemmatization</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>23</b>	<b>Bag of Words Model</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>24</b>	<b>TF-IDF</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>25</b>	<b>Word Embeddings: Word2Vec, GloVe</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>26</b>	<b>Basic Language Models: N-grams</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>27</b>	<b>Sentiment Analysis</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>28</b>	<b>Named Entity Recognition</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>29</b>	<b>Part-of-Speech Tagging</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>30</b>	<b>Text Classification</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>31</b>	<b>What is Computer Vision</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>32</b>	<b>Image as a Matrix of Pixels</b>
	Video Lesson

	Notes Lesson
	Quiz Lesson
<b>33</b>	<b>Basic Image Operations: Grayscale, Resize, Flip</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>34</b>	<b>Edge Detection: Sbel, Canny</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>35</b>	<b>Convolution Operation &amp; Filters</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>36</b>	<b>Pooling Layers</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>37</b>	<b>Image Classification Basics</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>38</b>	<b>Introduction to CNNs</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>39</b>	<b>Object Detection vs Clasification</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>40</b>	<b>Data Augmentation</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson

## AI TOOLS

Sl. No	Content / Topic
<b>1</b>	<b>Google Notebook LM AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson

<b>2</b>	<b>AI Tools that can be used in day to day life</b>
	Notebook LM
	Sider.ai
	Gamma.app
	Google Lens
	Drawify
	remove.bg
	Playground.com
	supermeme.ai
	namelix.com
<b>3</b>	<b>Important AI Tools that helps to understand Machine Learning and AI</b>
	Teachable Machine
	Machine Learning for Kids
	Machine Learning Playground
	Scratch
	Experiment with Google
	Pictoblox
	Labs.google
	AI Dungeon
<b>4</b>	<b>Introduction to Otter AI Tool, Magic School, Eduaide AI Tool, Brisk Teaching, Questionwell, Diffit</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>5</b>	<b>Presentation AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>6</b>	<b>Textero AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>7</b>	<b>Scratch AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>8</b>	<b>Google AI Studio AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>9</b>	<b>Hot Potato &amp; Answer Garden</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson

<b>10</b>	<b>Magic School AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>11</b>	<b>Adobe Firefly AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>12</b>	<b>Lumen 5 AI Tool</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>13</b>	<b>QuillBot</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson
<b>14</b>	<b>Notion AI</b>
	Video Lesson
	Notes Lesson
	Quiz Lesson

# Microsoft PowerBI Tool ( 90 days)

Sl. No	Content / Topic
<b>1</b>	<b>An introduction to Data Visualization</b>
	Introduction to data and data Visualization
	Evolution and Importance of in Data Visualization
<b>2</b>	<b>Introduction to Power BI</b>
	Best Practices in Data Visualization
	Story Telling in Data Visualization
<b>3</b>	<b>Connect and prepare data using Power BI</b>
	Introduction to Power BI and Power Query, Power BI Embedded
	Power BI Desktop, Power BI Service analytics
	Project- Loan Application Analysis
<b>4</b>	<b>Data Transformation in the Power Query</b>
	Getting Started with Power BI Introduction to GUI of Power BI Desktop
	Types of Data Connectors in Power BI
	Introduction to the Power Query Editor
	Introduction to GUI of Power Query
	Data transformations and preparation exercises - 1
	Data transformations and preparation exercises - 2
	Data transformations and preparation exercises - 3
	Data transformations and preparation exercises - 4
	Data transformations and preparation exercises - 5
	Data transformations and preparation exercises - 6
	Data transformations and preparation exercises - 7
	Data transformations and preparation exercises - 8
	Data transformations and preparation exercises - 9
	Data transformations and preparation exercises - 10
	Merging and Appending Operations
	Unpivot and Unpivot Operations
	Project- Healthcare Sales Analysis
<b>5</b>	<b>Data Model Relationships in Power BI</b>
	Introduction to Joins and Cardinality of Relationships
	Managing Relationships among data tables
	Project- Customer Churn Analysis
<b>6</b>	<b>Creating Report in Power BI Desktop</b>
	Introduction to Report View and templates
	Building reports using visuals
	Report Formatting
	Project- Product Sales Data Analysis
<b>7</b>	<b>Creating Interactive Reports in Power BI Desktop</b>
	Create Interactive reports

<b>8</b>	<b>Creating Dashboard</b>
<b>9</b>	<b>Collaboration and Sharing dashboard</b>
<b>10</b>	<b>Data Analysis Expressions</b>
	Introduction to DAX, Columns and Measures, Implicit and Explicit Measure
	DAX Queries
	Project- Marketing Campaign Insights Analysis
	Project- Financial Performance Analysis
<b>11</b>	<b>Case study</b>
	Case Study 1- Sales and Distribution
	Case study 2-Data Loading, Transformation, Modeling and KPI setup
	Case Study 3- Creating KPI Cards, Formatting and DAX-Based Measures in Power BI
	Case study 4- KPI Creation, Formatting, Quick Measures and Filtering
	Case Study 5- Creating Slicers, Tables and Trend Line Visual in PowerBI
	Case Study 6- Creating Vertical Bar Diagram, Donut Chart and Editing interactions in PowerBI

<b>Tableau ( 60 days )</b>	
Sl.	Content / Topic
<b>1</b>	<b>Tableau Introduction</b>
	Why Tableau
	History of Tableau
	Characteristics of Tableau
	Tableau versions
	Versions of tableau.
	Tableau Architecture and components
<b>2</b>	<b>Tableau Components</b>
	What is Tableau Desktop, Server
	What is Tableau Reader
	What is Tableau Online
	What is Tableau Public?
<b>3</b>	<b>Tableau Extensions</b>
	Types of Extensions
	When to use Tableau Extensions
	Differences between .Twb and .Twbx extensions
<b>4</b>	<b>Data Connection in Tableau Interface</b>
	Types of Data Connections in Tableau
	Connect to Live Data connection
	Connect to ExtractData connection in Tableau
	Creation of Extract file in Tableau
<b>5</b>	<b>Data Joins in Tableau</b>
	What is Joins
	Types of Joins
	When to use Joining Rules to perform the Joins in tableau.
	What is Custom SQL?
	Custom SQL Enabled Custom SQL
	Writing
	Data Refresh
<b>6</b>	<b>Data Blending in Tableau</b>
	What is Data Blending
	Types of Data Blending
	When to use Data Blending
	Rules to perform the Joins in tableau
	Join vs. Data Blending
<b>7</b>	<b>Graphs/Charts/Bars</b>
	Line Graphs
	Single Line graphs
	Dual Line Graphs
	Blended Axis
	Difference between Dual axis and Blended axis

	Horizontal Bar Charts
	Vertical Bar charts
	Side-Side by bar charts
	Stacked Bar charts
	Pie Charts
	Gantt Charts
<b>8</b>	<b>Maps</b>
	What is Tree Maps
	Heat Maps
	Tree map implementation
	Filed Maps
	What is Geo-Coding and implementation
	Importing External CustomGeo coding
	Symbol Maps
<b>9</b>	<b>Hierarchy in Tableau</b>
	What is a Hierarchy?
	Relation between Drill downs, Roll ups and Hierarchies.
	What are Automatic Hierarchies?
	How to createCustom Hierarchy in Tableau?
	Removing Hierarchy
<b>10</b>	<b>Aggregation and Disaggregation</b>
	What is Aggregation
	When to use Aggregation
	What is Disaggregation
	When to use Disaggregation.
<b>11</b>	<b>Filters and Types</b>
	What is Filters
	Filters on Dimensions
	What is Wild Card
	Filters on Measures
	Context Filters
	Global Filters
	Quick Filters
	Defining Filters at Source
	Defining Filters at Custom SQ
<b>12</b>	<b>Groups and Sets</b>
	What is Group
	When to use Group
	Editing Existing Group
	Limitation of groups
	What is Set
	When to Use Sets
	Types of Set
<b>13</b>	<b>Calculated Fields</b>
	What is Tableau Calculation
	When to use INDEX (),RANK(),LAST(),FIRST() Functions

	RUNNING_SUM Calculations
	WINDOW_SUM Calculations
	String Calculations
	Boolean Calculations
	DATE Calculations.
<b>14</b>	<b>Creating and Using Parameters</b>
	What is Parameter
	Creating Parameter
	Exploring Parameter Controls
	Work with the parameter
	Click interaction workingwith parameter
	Parameters and use with real time examples
	Dynamically Show and Hide Sheetswith Parameter
<b>15</b>	<b>Trend Analysis</b>
	What is Trend Analysis
	Logarithmic Model
	Exponential Model
	Linear Model
	Polynomial Mode
<b>16</b>	<b>Fore Casting and Reference Lines</b>
	What is Fore Casting and implementation
	What is Reference Line
	Lines
	Bands
	Distributions
	Box Plot
<b>17</b>	<b>Annotations</b>
	Mark Annotation
	Point Annotation
	Area Annotation
<b>18</b>	<b>Page-shelf or Automated Maps</b>
	What is Page Shelf?
	When to use Page Shelf
	Page Shelf Customized Controls
<b>19</b>	<b>Getting Started with Dashboard Sections</b>
	What is Dashboard, when to use Dashboard and Ways to use Dashboard
	What is work book and When to use Workbook
	What is work sheet and When to use worksheets
	What is stories their usage
	Ways to use Workbook, Dashboard, Worksheet, Stories
<b>20</b>	<b>Dash Board Components</b>
	Horizontal
	Vertical component
	Image Component
	Text Component
	Blank Component

<b>21</b>	<b>Actions in Tableau</b>
	What is Actions& When to use Actions
	Types of Actionsin tableau
	How to Triggerthe Action
<b>22</b>	<b>Tableau Advanced Charts– User defined Charts (IMP)</b>
	Water Fall charts
	Donut charts
	FunnelCharts
	Word cloud
	Lollipops charts
	Whisker plots
	Scatter plo
<b>23</b>	<b>Different Add INS and new feature in Tableau</b>
	Advanced Tableau 10 New Features
	Reporting Migration Processand Check list in Real-Time
<b>24</b>	<b>Tableau Desktop</b>
	Publishing workbook and data source
	Managing and creationof sites
	Migration of workbook in different environment
	Tabadmin commands on server level
	Postgrey SQL to connect the tableau server
	Postgrey SQL to create server levelreport
	Backup and recoveryat tableau server
	Performance recording at server level
<b>25</b>	<b>Getting Started with Tableau Prep</b>
	The Union Step
	The Output Step
	The Tableau Prep Interface
	The Input Step
	The Cleaning Step
	Group and Replace
	The Profile Pane
	The Pivot Step
	The Aggregate Step
	The Join Step