A white grid with black text

Description automatically generated

**Additional Free Resources**

**Books**:  
• "Python Data Science Handbook" by Jake VanderPlas available for free on GitHub, offers a comprehensive introduction to the primary tools of data science in Python including IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and related topics.

**Platforms**:  
• GitHub: for collaborating on projects and building a professional portfolio.  
• Kaggle: for accessing a variety of datasets and competing in data science challenges to practice and showcase skills.

**Project Ideas Separately Listed**

*Beginner Projects*:

* Create interactive dashboards in Excel and Tableau to visualize sales or customer data.
* Build and query a SQL database for a small business to manage inventory and sales records.
* Develop simple Python applications like a text-based adventure game or a personal finance manager.

*Intermediate Projects:*

* Perform extensive data cleaning and exploratory data analysis on a dataset from Kaggle using Pandas and Matplotlib.
* Design and execute A/B tests for a website feature change and analyze the impact on user behavior.

*Advanced* Projects:\_

* Use machine learning to predict housing prices based on features like location, size, and amenities.
* Develop a neural network model to recognize handwritten digits with TensorFlow and Keras.
* Build and deploy a machine learning model in a production environment using Docker and Kubernetes for scaling.

These resources and projects provide a robust framework to guide your learning journey in data science, combining theoretical knowledge with practical applications to build a strong foundation and advanced skills in the field.

**Data Science Learning Timetable**

**May to September (1 hour per day)**

1. May 6 - May 31: Beginner Python

* Focus: Basic Python syntax, data types, and simple scripts.

1. June 1 - June 30: SQL

* Focus: Basic SQL queries, joins, and subqueries.

1. July 1 - July 31: Tableau + Excel

* Focus: Creating charts, using pivot tables, and interactive dashboards in Excel and Tableau.

1. August 1 - August 31: Data Analysis with Python (Pandas)

* Focus: Data manipulation, cleaning, and basic visualizations using Pandas.

1. September 1 - September 30: Probability and Statistics

* Focus: Basic probability, distributions, descriptive statistics, and inferential statistics.

**October to December (2 hours per day)**

1. October 1 - October 31: Product Analytics

* Focus: Understanding metrics, conducting A/B tests, and using Google Analytics.

1. November 1 - November 30: Introduction to Machine Learning

* Focus: Basic machine learning concepts, supervised learning models.

1. December 1 - December 31: Machine Learning (Supervised Learning)

* Focus: Deep dive into supervised learning algorithms and their applications.

**January to March (2 hours per day)**

1. January 1 - January 31: Deep Learning

* Focus: Basics of neural networks, implementing simple networks using TensorFlow or PyTorch.

1. February 1 - February 28: Advanced Data Structures and Algorithms

* Focus: Learning crucial data structures like trees, graphs; algorithms like sorting, searching.

1. March 1 - March 31: Machine Learning Ops

* Focus: Introduction to MLOps practices, deploying models, and basic use of Docker and Kubernetes.

***Notes***:

1. **Project Work**: Allocate the last week of each module to work on a related project. This helps in consolidating your learning through practical application.
2. **Weekends**: Use weekends optionally for catch-up on any missed content or to extend project work.
3. **Flexibility**: Adjust the pace as needed based on complexity of topics or personal comfort with the material.

This schedule is designed to systematically build up your knowledge and skills in data science, transitioning from foundational topics to more advanced concepts as you increase your daily study time.