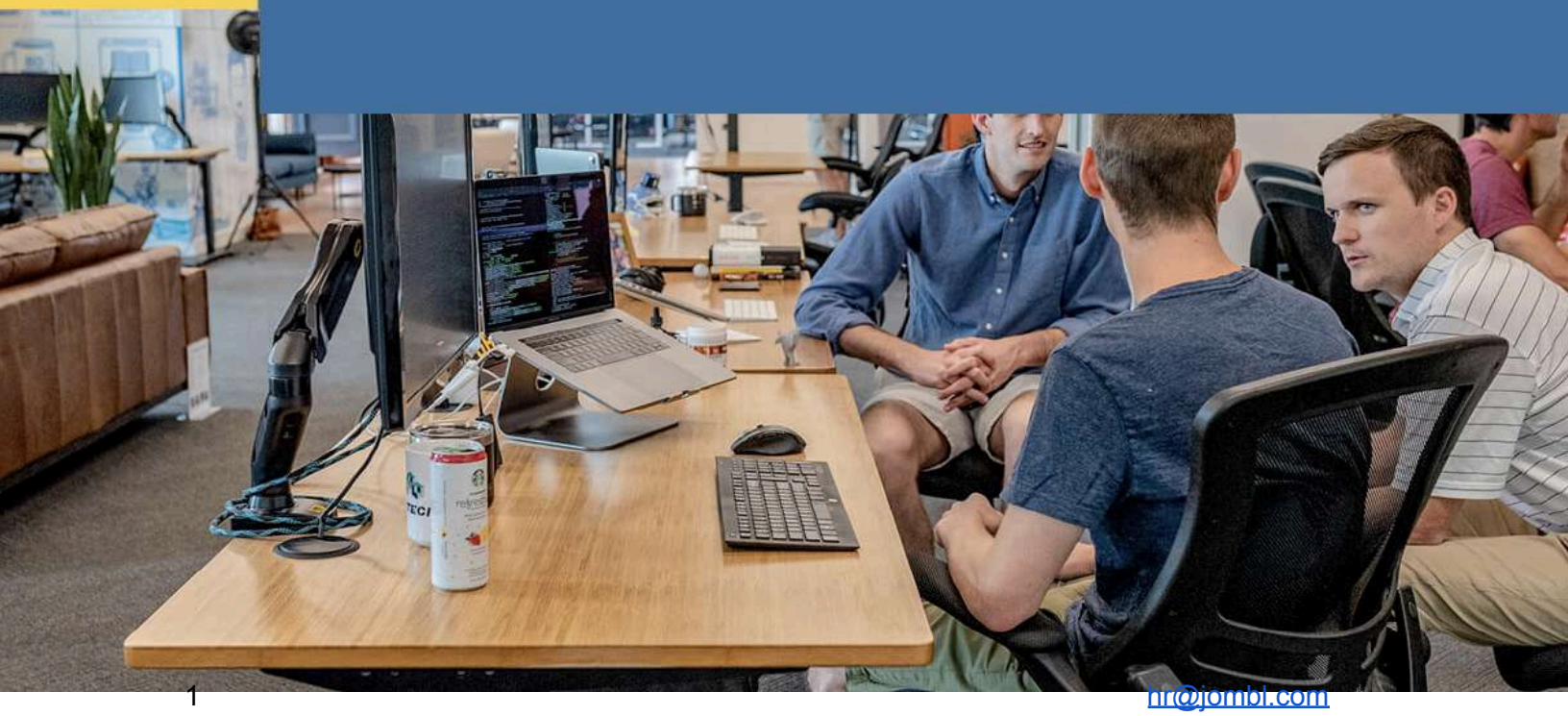
A Platform for progress, A JOMBL for All

Data Engineering Syllabus



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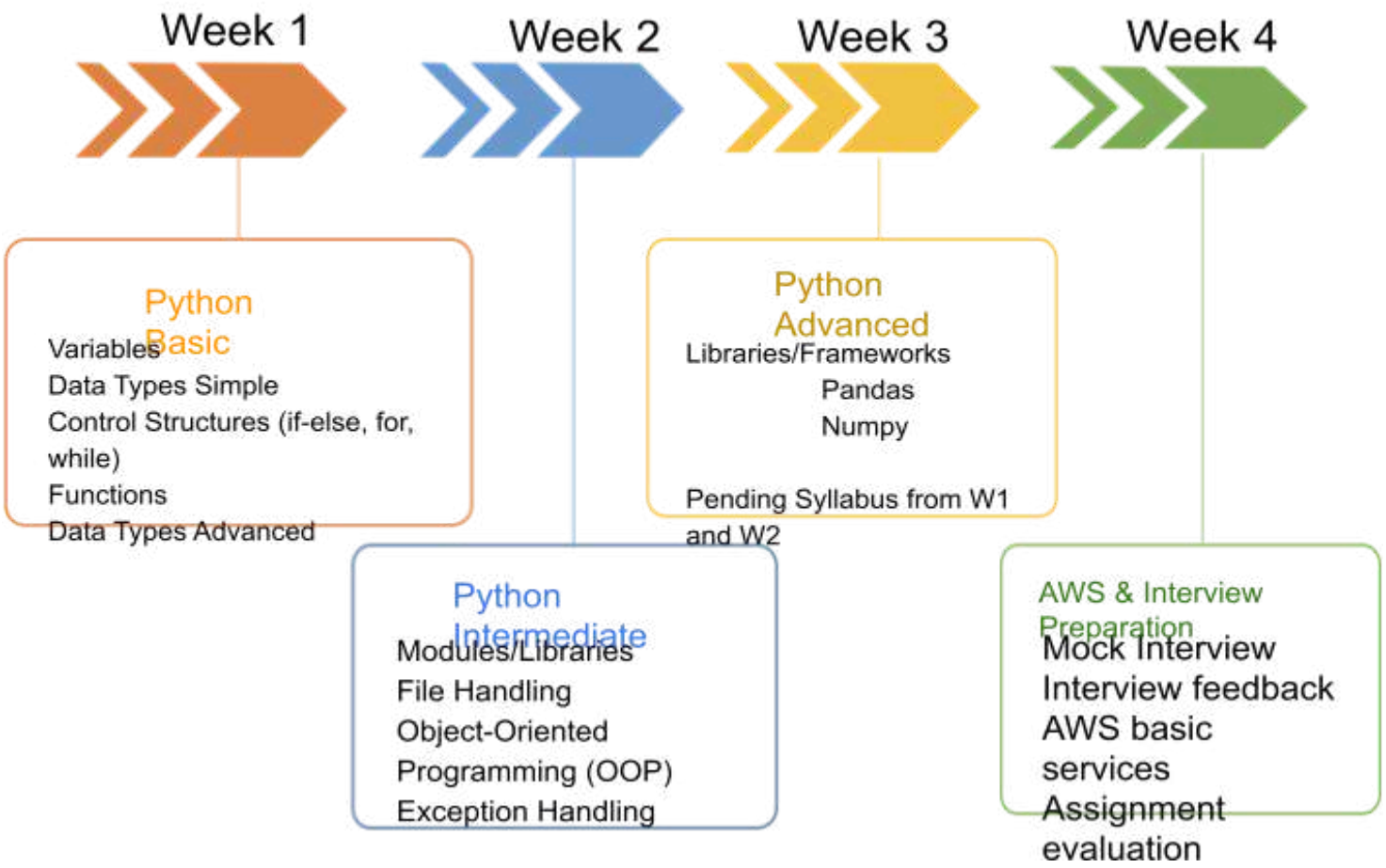
Learning Path & Plan

Week 1 to Week 4 Plan



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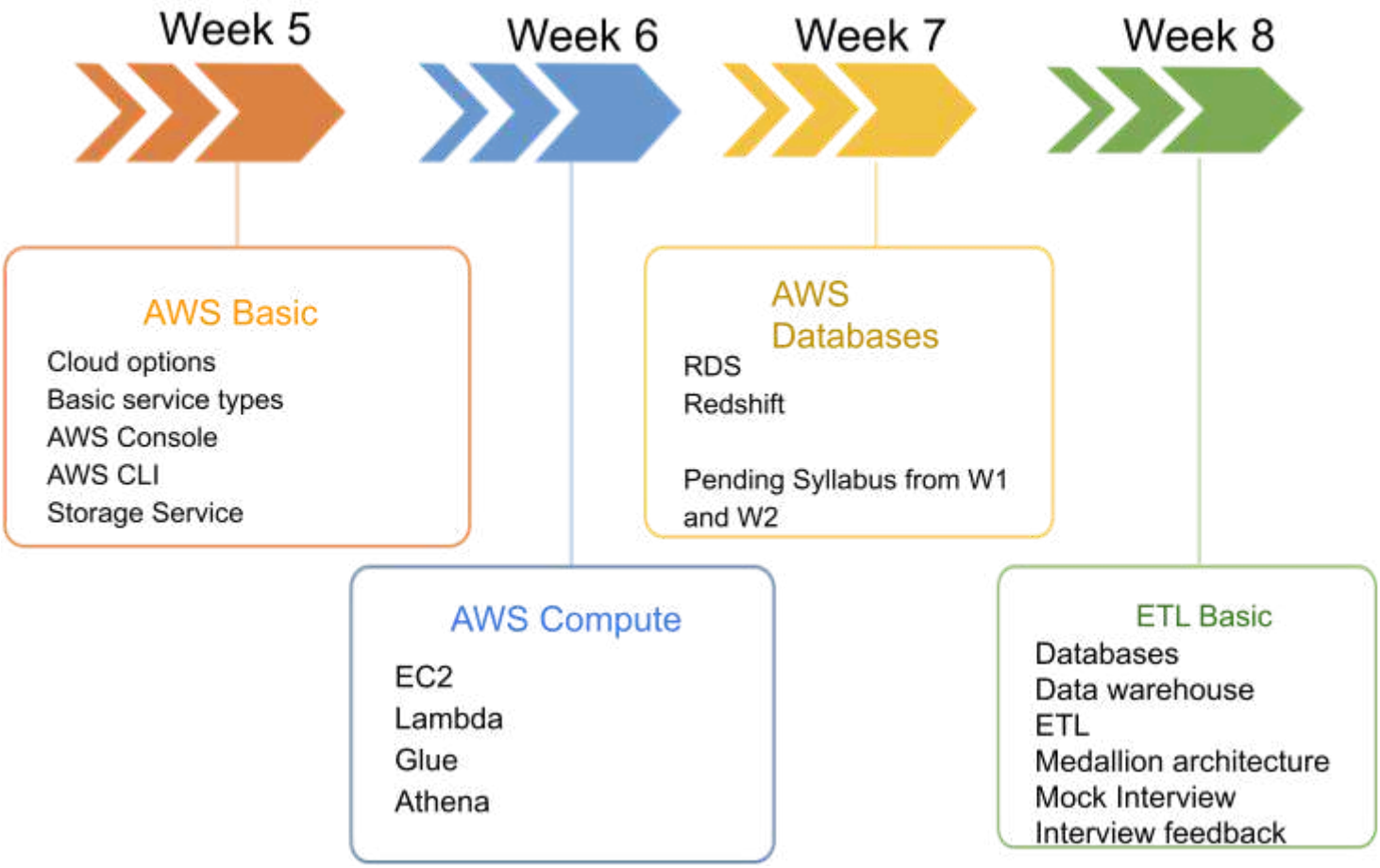
Week 5 to Week 8 Plan



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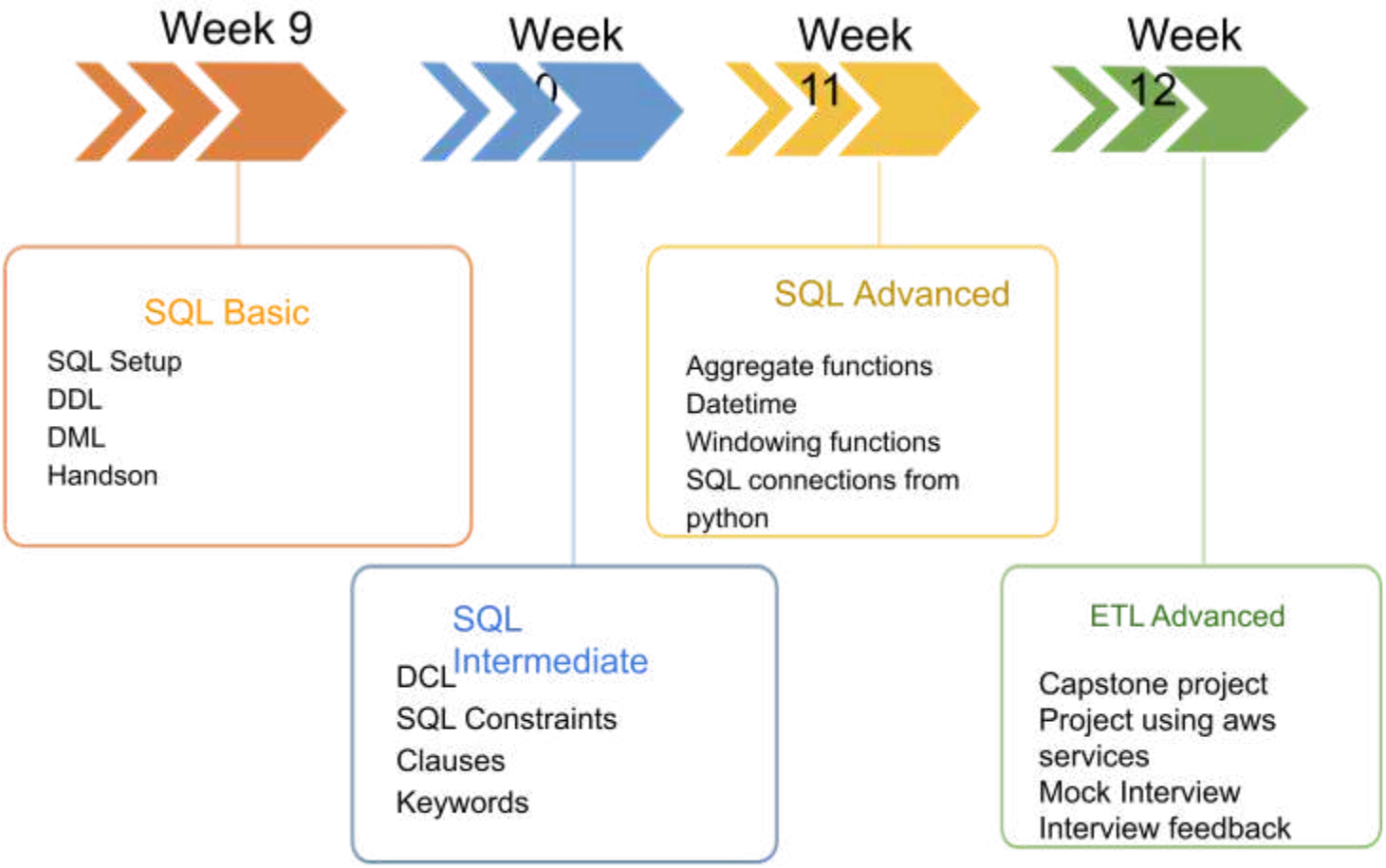
Week 9 to Week 12 Plan



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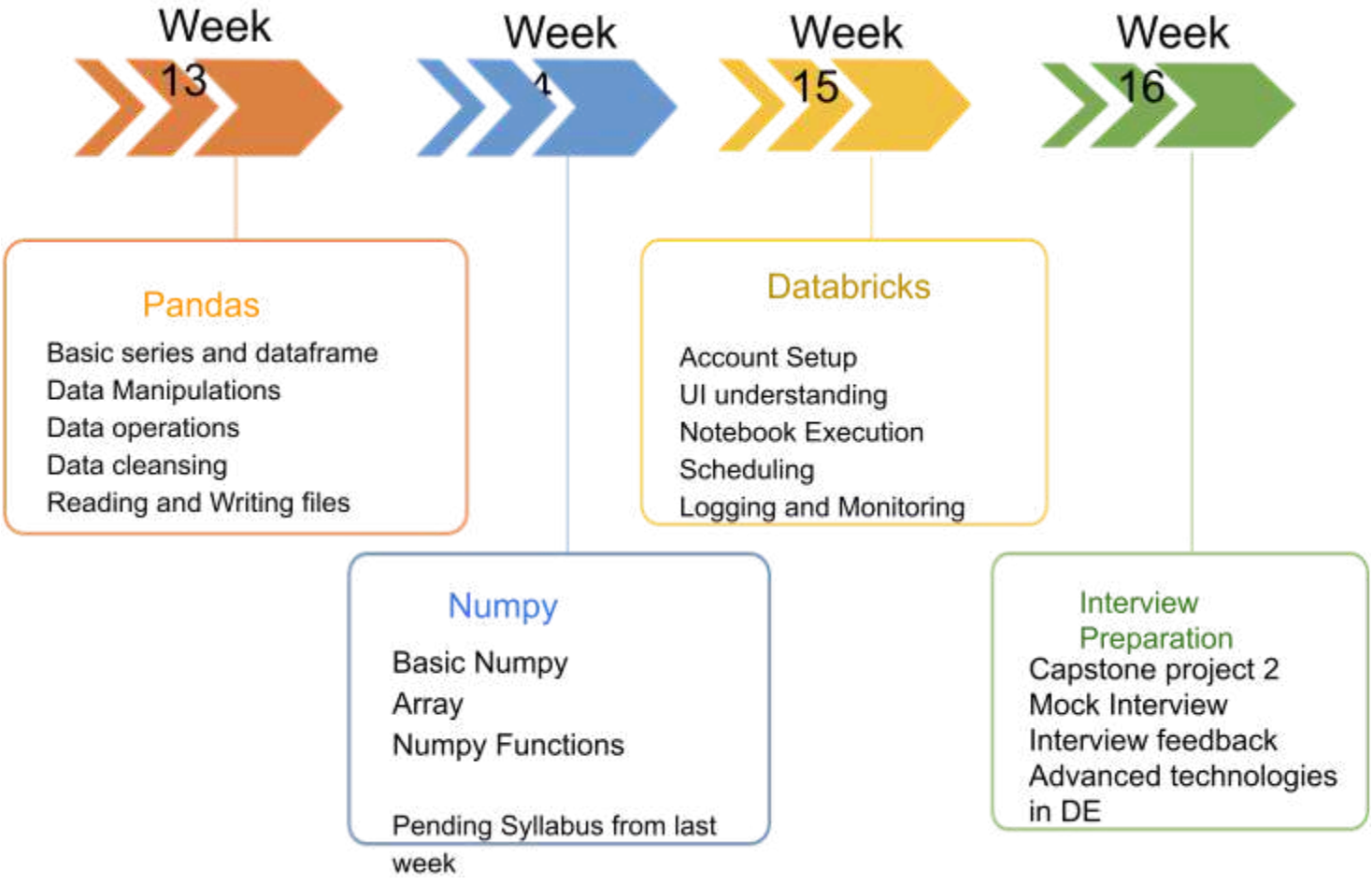
Week 13 to Week 16 Plan



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Python Setup ,Variables, Data Types, Functions

- What is Python
- A Brief History and Applications of Python
- How Python is differ from other languages
- Installing Python and Environment Setup
- Variables & Data types
- Python Operators
- Control Statements in Python If else
- Loops in Python
- Programs on all above concepts
- Defining and calling Function
- The anonymous Functions
- Passing Functions to a Function
- Lists, tuples & Dictionary String Operations in Python
- Generators, Comprehensions
- Lambda Expressions
- File handling

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Python Object Oriented Concepts

- Object Oriented Programmings
- Define Classes & Creating Objects
- Class variables and Instance Variables Constructors
- Concept of Object and Classes
- Access Modifiers
- How to define Python classes
- Built-In Class Attributes
- What is Inheritance
- What is Polymorphism
- Exception handling
- Libraries and Framework

Numpy and Operations

- Concepts of Numpy
- Basic & Matrix Operations
- Indexing, Slicing, Iterating Array
- NumPy Functions

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Pandas and Operations

- What is Pandas
- Pandas Series
- Pandas DataFrame
- DataFrame Indexing and Loading
- Dataframe Operations
- Data Manipulation
- Data Cleaning
- Grouping and Aggregation
- Querying a DataFrame
- Missing Values
- Merging Dataframes(Joins & Filtering)
- Pivot Tables
- Plots using Pandas

Preparation

- Interview Preparation & Mock Interview
- Interview evaluation
- Assignment evaluation

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AWS Cloud Services

- What is Cloud
- What is AWS
- What is Azure
- Simple Storage Service
- Buckets, Objects, Permissions, Versioning
- Lambda
- Creating and deploying Lambda functions
- RDS
- Setting up RDS instances, Connecting to RDS
- Glue
- Glue Workflow
- ETL (Extract, Transform, Load) operations, Crawlers
- Athena
- Ad Hoc Querying
- Redshift
- Elastic Compute Cloud

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Databricks & Applications

- What is Databricks
- Setting Up Databricks Environment
- Creating and managing clusters
- Ingesting data from DBFS
- Loading data from cloud storage
- Handling missing and inconsistent data
- Creating ETL jobs
- Databricks Jobs
- Error handling and job monitoring
- Scheduling jobs with Databricks Workflows

Capstone Projects

- Data Pipeline Project
- Glue ETL Project
- Medallion Architecture Project

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