

# Plan Detallado de Preparación – Backend Python (Nivel Medio)

Duración: 3 meses (12 semanas)

Frecuencia: 3 días por semana

Objetivo: Reconocer patrones y resolver problemas clásicos de entrevistas técnicas

## Semana 1

### **Día 1: Two Pointers**

- Two Sum
- Valid Palindrome
- Remove Duplicates from Sorted Array
- Merge Sorted Array
- Container With Most Water
- Move Zeroes
- Squares of a Sorted Array
- Reverse String
- Is Subsequence
- Trapping Rain Water

### **Día 2: Sliding Window**

- Best Time to Buy and Sell Stock
- Longest Substring Without Repeating Characters
- Minimum Size Subarray Sum
- Maximum Average Subarray I
- Permutation in String
- Find All Anagrams in a String
- Max Consecutive Ones III
- Longest Repeating Character Replacement
- Sliding Window Maximum
- Subarray Product Less Than K

### **Día 3: HashMap / Prefix Sum**

- Two Sum
- Contains Duplicate
- Group Anagrams
- Subarray Sum Equals K
- Continuous Subarray Sum
- Ransom Note
- Valid Anagram
- Intersection of Two Arrays
- Happy Number

- First Unique Character in a String

## Semana 2

### **Día 4: Stack**

- Valid Parentheses
- Min Stack
- Daily Temperatures
- Next Greater Element I
- Next Greater Element II
- Evaluate Reverse Polish Notation
- Baseball Game
- Remove All Adjacent Duplicates In String
- Largest Rectangle in Histogram
- Asteroid Collision

### **Día 5: Linked List**

- Reverse Linked List
- Merge Two Sorted Lists
- Linked List Cycle
- Middle of the Linked List
- Remove Nth Node From End of List
- Intersection of Two Linked Lists
- Palindrome Linked List
- Reorder List
- Add Two Numbers
- Swap Nodes in Pairs

### **Día 6: Binary Search**

- Binary Search
- Search Insert Position
- Find Minimum in Rotated Sorted Array
- Search in Rotated Sorted Array
- First Bad Version
- Find Peak Element
- Sqrt(x)
- Guess Number Higher or Lower
- Koko Eating Bananas
- Median of Two Sorted Arrays

## Semana 3

### **Día 7: Tree BFS / DFS**

- Binary Tree Inorder Traversal
- Maximum Depth of Binary Tree
- Same Tree
- Invert Binary Tree
- Binary Tree Level Order Traversal
- Symmetric Tree
- Path Sum
- Lowest Common Ancestor of a Binary Tree
- Diameter of Binary Tree
- Validate Binary Search Tree

### **Día 8: Graph**

- Number of Islands
- Clone Graph
- Course Schedule
- Course Schedule II
- Pacific Atlantic Water Flow
- Word Ladder
- Rotting Oranges
- Keys and Rooms
- Evaluate Division
- Find the Town Judge

### **Día 9: Heap / Top K**

- Kth Largest Element in an Array
- Top K Frequent Elements
- Find Median from Data Stream
- Merge k Sorted Lists
- K Closest Points to Origin
- Task Scheduler
- Reorganize String
- Ugly Number II
- Sliding Window Maximum
- Smallest Range Covering Elements from K Lists

## **Semana 4**

### **Día 10: Dynamic Programming**

- Climbing Stairs
- House Robber
- House Robber II
- Coin Change
- Longest Increasing Subsequence
- Unique Paths
- Minimum Path Sum
- Decode Ways

- Word Break
- Edit Distance

### **Día 11: Greedy**

- Jump Game
- Jump Game II
- Gas Station
- Candy
- Assign Cookies
- Lemonade Change
- Queue Reconstruction by Height
- Non-overlapping Intervals
- Partition Labels
- Minimum Number of Arrows to Burst Balloons

### **Día 12: Backtracking**

- Subsets
- Subsets II
- Permutations
- Permutations II
- Combination Sum
- Combination Sum II
- Letter Combinations of a Phone Number
- Generate Parentheses
- Palindrome Partitioning
- N-Queens

## **Semana 5**

### **Día 13: Two Pointers**

- Two Sum
- ValidPalindrome
- Remove Duplicates from Sorted Array
- Merge Sorted Array
- Container With Most Water
- Move Zeroes
- Squares of a Sorted Array
- Reverse String
- Is Subsequence
- Trapping Rain Water

### **Día 14: Sliding Window**

- Best Time to Buy and Sell Stock
- Longest Substring Without Repeating Characters

- Minimum Size Subarray Sum
- Maximum Average Subarray I
- Permutation in String
- Find All Anagrams in a String
- Max Consecutive Ones III
- Longest Repeating Character Replacement
- Sliding Window Maximum
- Subarray Product Less Than K

### ***Día 15: HashMap / Prefix Sum***

- Two Sum
- Contains Duplicate
- Group Anagrams
- Subarray Sum Equals K
- Continuous Subarray Sum
- Ransom Note
- Valid Anagram
- Intersection of Two Arrays
- Happy Number
- First Unique Character in a String

## **Semana 6**

### ***Día 16: Stack***

- Valid Parentheses
- Min Stack
- Daily Temperatures
- Next Greater Element I
- Next Greater Element II
- Evaluate Reverse Polish Notation
- Baseball Game
- Remove All Adjacent Duplicates In String
- Largest Rectangle in Histogram
- Asteroid Collision

### ***Día 17: Linked List***

- Reverse Linked List
- Merge Two Sorted Lists
- Linked List Cycle
- Middle of the Linked List
- Remove Nth Node From End of List
- Intersection of Two Linked Lists
- Palindrome Linked List
- Reorder List
- Add Two Numbers
- Swap Nodes in Pairs

## **Día 18: Binary Search**

- Binary Search
- Search Insert Position
- Find Minimum in Rotated Sorted Array
- Search in Rotated Sorted Array
- First Bad Version
- Find Peak Element
- Sqrt(x)
- Guess Number Higher or Lower
- Koko Eating Bananas
- Median of Two Sorted Arrays

## **Semana 7**

### **Día 19: Tree BFS / DFS**

- Binary Tree Inorder Traversal
- Maximum Depth of Binary Tree
- Same Tree
- Invert Binary Tree
- Binary Tree Level Order Traversal
- Symmetric Tree
- Path Sum
- Lowest Common Ancestor of a Binary Tree
- Diameter of Binary Tree
- Validate Binary Search Tree

### **Día 20: Graph**

- Number of Islands
- Clone Graph
- Course Schedule
- Course Schedule II
- Pacific Atlantic Water Flow
- Word Ladder
- Rotting Oranges
- Keys and Rooms
- Evaluate Division
- Find the Town Judge

### **Día 21: Heap / Top K**

- Kth Largest Element in an Array
- Top K Frequent Elements
- Find Median from Data Stream
- Merge k Sorted Lists

- K Closest Points to Origin
- Task Scheduler
- Reorganize String
- Ugly Number II
- Sliding Window Maximum
- Smallest Range Covering Elements from K Lists

## **Semana 8**

### **Día 22: Dynamic Programming**

- Climbing Stairs
- House Robber
- House Robber II
- Coin Change
- Longest Increasing Subsequence
- Unique Paths
- Minimum Path Sum
- Decode Ways
- Word Break
- Edit Distance

### **Día 23: Greedy**

- Jump Game
- Jump Game II
- Gas Station
- Candy
- Assign Cookies
- Lemonade Change
- Queue Reconstruction by Height
- Non-overlapping Intervals
- Partition Labels
- Minimum Number of Arrows to Burst Balloons

### **Día 24: Backtracking**

- Subsets
- Subsets II
- Permutations
- Permutations II
- Combination Sum
- Combination Sum II
- Letter Combinations of a Phone Number
- Generate Parentheses
- Palindrome Partitioning
- N-Queens

## **Semana 9**

### **Día 25: Two Pointers**

- Two Sum
- Valid Palindrome
- Remove Duplicates from Sorted Array
- Merge Sorted Array
- Container With Most Water
- Move Zeroes
- Squares of a Sorted Array
- Reverse String
- Is Subsequence
- Trapping Rain Water

### **Día 26: Sliding Window**

- Best Time to Buy and Sell Stock
- Longest Substring Without Repeating Characters
- Minimum Size Subarray Sum
- Maximum Average Subarray I
- Permutation in String
- Find All Anagrams in a String
- Max Consecutive Ones III
- Longest Repeating Character Replacement
- Sliding Window Maximum
- Subarray Product Less Than K

### **Día 27: HashMap / Prefix Sum**

- Two Sum
- Contains Duplicate
- Group Anagrams
- Subarray Sum Equals K
- Continuous Subarray Sum
- Ransom Note
- Valid Anagram
- Intersection of Two Arrays
- Happy Number
- First Unique Character in a String

## **Semana 10**

### **Día 28: Stack**

- Valid Parentheses
- Min Stack

- Daily Temperatures
- Next Greater Element I
- Next Greater Element II
- Evaluate Reverse Polish Notation
- Baseball Game
- Remove All Adjacent Duplicates In String
- Largest Rectangle in Histogram
- Asteroid Collision

### **Día 29: Linked List**

- Reverse Linked List
- Merge Two Sorted Lists
- Linked List Cycle
- Middle of the Linked List
- Remove Nth Node From End of List
- Intersection of Two Linked Lists
- Palindrome Linked List
- Reorder List
- Add Two Numbers
- Swap Nodes in Pairs

### **Día 30: Binary Search**

- Binary Search
- Search Insert Position
- Find Minimum in Rotated Sorted Array
- Search in Rotated Sorted Array
- First Bad Version
- Find Peak Element
- $\text{Sqrt}(x)$
- Guess Number Higher or Lower
- Koko Eating Bananas
- Median of Two Sorted Arrays

## **Semana 11**

### **Día 31: Tree BFS / DFS**

- Binary Tree Inorder Traversal
- Maximum Depth of Binary Tree
- Same Tree
- Invert Binary Tree
- Binary Tree Level Order Traversal
- Symmetric Tree
- Path Sum
- Lowest Common Ancestor of a Binary Tree
- Diameter of Binary Tree
- Validate Binary Search Tree

### **Día 32: Graph**

- Number of Islands
- Clone Graph
- Course Schedule
- Course Schedule II
- Pacific Atlantic Water Flow
- Word Ladder
- Rotting Oranges
- Keys and Rooms
- Evaluate Division
- Find the Town Judge

### **Día 33: Heap / Top K**

- Kth Largest Element in an Array
- Top K Frequent Elements
- Find Median from Data Stream
- Merge k Sorted Lists
- K Closest Points to Origin
- Task Scheduler
- Reorganize String
- Ugly Number II
- Sliding Window Maximum
- Smallest Range Covering Elements from K Lists

## **Semana 12**

### **Día 34: Dynamic Programming**

- Climbing Stairs
- House Robber
- House Robber II
- Coin Change
- Longest Increasing Subsequence
- Unique Paths
- Minimum Path Sum
- Decode Ways
- Word Break
- Edit Distance

### **Día 35: Greedy**

- Jump Game
- Jump Game II
- Gas Station
- Candy

- Assign Cookies
- Lemonade Change
- Queue Reconstruction by Height
- Non-overlapping Intervals
- Partition Labels
- Minimum Number of Arrows to Burst Balloons

### ***Día 36: Backtracking***

- Subsets
- Subsets II
- Permutations
- Permutations II
- Combination Sum
- Combination Sum II
- Letter Combinations of a Phone Number
- Generate Parentheses
- Palindrome Partitioning
- N-Queens