



IT FOR ALL 2022/2023 COURSES

Weekend IT Bootcamp Brochure

✉ info@decloud23tech.com

☎ +44 7308 748843



CLOUD 23
TECHNOLOGIES



teliytech

decloud23tech.com

TeliyTech.co.Uk

TABLE OF CONTENT

Content	Page
1. Table of content	1
2. Reasons you should choose us	2
3. What you will need	3
4. Course 1: Web Design	4
5. Course 2: Software Development (Frontend Development)	5
6. Course 3: IT Technical Support (Helpdesk)	6
7. Course 4: Course 4: Microsoft Technical Support (Microsoft Office 365 Pro)	7
8. Course 5: Software Development (Backend)	8
9. Course 6: Data Analysis, Science & Machine Learning	10
10. Course 7: Agile Scrum Master (+ Certification)	14
11. Course 8: Business Analysis (+ Certification)	15
12. Course 9: Project management (Prince 2 + Certification)	16
13. Course 10: User Interface Design (UI/UX)	17

10 REASONS WHY ITFA BOOTCAMP STANDS OUT:



1. Our Bootcamp is beyond Training, it includes Mentorship and Personal Career Guidance.

2. Equipping you with Practical skills to get lucrative & High Paying IT Jobs.

3. We help you build Career Portfolio worth 2/3 years' Working Experience.

4. We Prepare our students for IT/Tech Interviews using our Experience as a Professional in the industry.

5. Connect our students to IT Recruiting Agencies.

6. Teach you how to Negotiate and what to look for in a Job Offer.

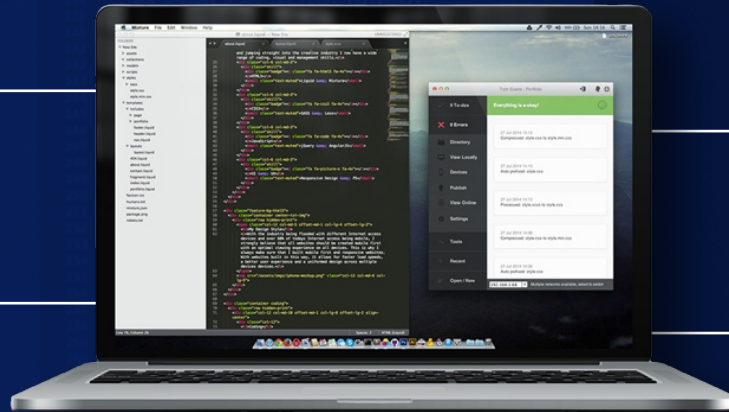
7. Teach You how to Make Money from Home using your IT knowledge.

8. We guide you in optimizing your CV & LinkedIn Account to multiply your chances of landing a Job.

9. Networking with fellow like minds.

10. We show you your Career Path, what to learn & how to get to the Top.


Microsoft Teams



What you will Need:

1. A Computer (Laptop or Desktop)
2. Windows Or Mac Operating System.
3. A Good Internet Connection.
4. Microsoft Teams.
5. A Web Browser

Course 1: Web Design

Technologies: HTML 5, CSS 3, JavaScript, jQuery, Bootstrap 5

1. Introduction to HTTP, CSS, Web, Web Server, and Web Browser
2. Basic HTML Head, Body, Elements & Attributes
3. Basic CSS, Box Model & Positioning
4. Web Pages Layout
5. Web Page Navigation
 - a. Sidebar (Vertical)
 - b. Horizontal Menu with Dropdowns
 - c. Footer
6. Web Form using HTML & CSS
7. Web Page with Media
8. Basic JavaScript & jQuery (Variables, Array, Functions, Predefined Methods)
9. Introduction to Prototyping & Wireframing (with Balsamic)
10. Introduction to Web UI/UX (with Figma)
11. Working With Web Storage (Local Storage, Session Storage)
12. Using Zen Coding for High-Speed Web Page Design

Projects:

(HTML5, CSS3 & Bootstrap 5)

1. Corporate Website/ Landing Page Design
2. Web Form & Wizard Design (Login, Registration Page)
3. Professional Website Design (Portfolio Page)
4. Responsive Admin Dashboard Design
5. Web Hosting, Domain Name & Server Set Up

Course 2: Software Development (Frontend Development)

Technologies: React, Post-Man, Web-Pack

Level 1:

1. Introduction to Single Page Application and Component Architecture.
2. Introduction to ES 6 and Es5
3. Babel, Webpack & Grunt Task Runner
4. Introduction to TypeScript
5. Component, Props, State & JSX
6. Control Structure / Conditionals
7. Life Cycle Methods
8. Working with Array / Collections
9. React Forms, Router
10. CSS and SASS Styling
11. Bootstrap 5, Emotion or Tailwind CSS
12. React Life Cycle Methods
13. React Hooks
 - a. Use State, Use Reducer, useContext
 - b. Use Effect
 - c. UseCallback, UseMemo & UseRef
 - d. Custom Hooks
 - e. useMemo
14. React Hooks Form
 - a. Controlled & Uncontrolled
 - b. Form Validation

Level 2:

15. Working with HTTP and Backend API (AXIOS, Fetch, JWT)
 - a. CRUD
 - b. Authentication (Oauth)
16. File Upload in React & Progress Bar
17. React CRUD with Firebase
18. Working with Tables & Pagination
19. Implementing File Drag & Drop Upload
20. React Redux & State Management
 - a. Actions & Action Creators
 - b. Reducers
 - c. Store
21. Performance Optimization of React Apps
 - a. Memorizing React Component
 - b. Code Splitting with Dynamic Import
 - c. Lazy Loading Components and Images
22. Component Diagram with Routing

Projects:

(React, TypeScript, Hooks, React Hooks Form, Axios, Emotion & Redux)

1. Web Based Calculator
2. A Web Based Photo Gallery or Weather App
3. To-do Apps (CRUD)
4. E Commerce Platform
5. Social Network Platform (Login, Register, User, Profile & Posts)
6. A Question & Answer Platform (Reddit or Quora Clone)

Course 3: IT Technical Support (Helpdesk)

Technologies: OS (Windows & Linux), Networking (Basic), Internet, Customer Support, Troubleshooting, Mail Server, Active Directory,

1. Introduction to computer

- a. Understanding Computer Hardware: Computer Cases, Motherboards, CPU/Processor, RAM, Hard Drives, Power Supplies, Graphics Cards, Operating Systems
- b. Computer Software: Bios (Firmware), Operating System (OS), System Application

2. Computer OS Installation

- a. Windows, Linux

3. Computer Shortcuts

4. Commons Office Applications

- a. Printers: Type of printers, How to Install Printers Drivers, how to share printers over a network
- b. Office Application
- c. Cloud Drives

5. Windows and Linux filesystems

- a. Set up users, groups, and permissions for account access (Windows)
- b. Install, configure, and remove software on the Windows and Linux operating systems

6. Configure disk partitions and filesystems

7. Computer Network

- a. IP addressing, Networking Device, DHCP configuration, NSLookup and tracert, speed testing, Firewall Configuration

8. Servers

- a. Introduction
- b. Server types and common Example
- c. Basic Server Configuration
- d. Active Directory

9. Virtualization

- a. Setting up a virtual Machine
- b. Remote Desktop/ Port forwarding

10. Introduction Cloud Computing

- a. Infrastructure as a Service
- b. Software as a Service
- c. Platform as a service

11. Computer Security and Backup

- a. Backup and disaster recovery

12. Ten Common IT Issue in IT Support Specialist role and how to tackle them

13. CV design, LinkedIn design and Interview Preparation

Course 4: Microsoft Technical Support (Microsoft Office 365 Pro)

1. Introduction to Microsoft Technical Support

2. Microsoft 365 Admin Center

- a. Office 365 Licensing and Subscription,
- b. Signup for Office 365 E5 Trial
- c. Managing Users and Identities in Office 365 (Admin Center)
- d. Managing Licenses - Office 365 Admin Center
- e. Managing Permissions and User Settings
- f. Overview Users, Billing & Service Requests
- g. M365 Admin Center - Services & Add-ins
- h. M 365 Admin Center Settings: Adding Domain and DNS Records
- i. Office 365 Admin Center: Service Health, Message Center, Adding User Alias/Sign
- j. Admin Center End User & Azure Information Protection

3. Office 365 Azure and AD Lab

- a. Azure VM Creation for Office 365 Labs
- b. Installing Active Directory Domain Services
- c. Installing Pre-requisites for Exchange Server 2013 in Azure Labs
- d. Exchange 2013 Installation

4. Office 365 User sync with AD Connect

- a. Understanding Directory Synchronization
- b. Installing and Configuring ID Fix & Azure AD Connect tool
- c. Understanding Directory Synchronization

5. Exchange

- a. Messaging infrastructure lifecycle
- b. Mail Flow
- c. Role base permission in M365
- d. Hybrid deployment
- e. Mailbox Migration

6. One Drive

7. SharePoint

- a. Intro
- b. Creating a Share point site and pages

8. Other Apps

9. Introduction to Cloud Computing and Azure Cloud (AZ 900)

- a. Cloud Service Models
- b. Cloud Deployment Models
- c. Core Azure Services (Compute, Storage etc.)
- d. Azure Security & Network Security
- e. Identity, Governance& Compliance Features
- f. Azure Cost Management & Service Level Agreement

10. Compliance and Security

11. Common Microsoft 365 IT Issues

12. Certification Guides (Office 365 & Azure AZ 900)

13. Interviews, CV and LinkedIn Preparation

Course 5: Software Development (Backend)

Technologies: Node, TypeScript, Postman, MySQL/PostgreSQL, MongoDB, OAuth2 & JWT, REST, GraphQL, TypeORM, Unit Testing.

Level 1

1. Introduction To Backend Development

- a. Web Server
- b. HTTP & Methods
- c. Common Network Protocols

2. Installing Development Tools

- a. Node, Typescript, Postman, DB Server & DBMS etc.

3. Introduction to JavaScript

- a. Variables, Data Types & Arrays or Collections
- b. ES Methods / Vanilla JS
- c. ES 6 Methods
- d. OOP in JavaScript

4. Introduction to Typescript

- a. Data Types, Control Structures & Functions
- b. Classes, Interface & Objects
- c. Namespace & Modules
- d. Generic Types, Union Types, Casting, Null etc.

5. Data Structure and Algorithm

- a. Big O: Time & Space Complexity
- b. Arrays
- c. String
- d. Stack & Queue
- e. Hash Table
- f. Searching
- g. Sorting

6. Solving Coding Interview Problems

- a. Sum of all Even Numbers, Odd, Positive and Negative
- b. Print all Even Numbers
- c. Print All Odd Numbers
- d. Fizz Buzz Problem
- e. Find Repeated Numbers in an Array.
- f. Sort an array Case insensitively (Ignoring Case)
- g. Determine if a string is Palindrome
- h. Determine if 2 strings are Anagram
- i. Implement Binary Search
- j. Create Random Integers in a given Range

7. Object Oriented Programming

8. Introduction to Databases

- a. Data Definition Language (DDL: Create, Alter) etc.
- b. Data Manipulation Language (DML: Select, Insert, Delete, Truncate etc.)

Level 2

9. Solid Principles of Object-Oriented Programming

10. Software Design Patterns

11. Designing a Database Schema for a Task Management App

12. Basics of Nest JS & Set Up

- a. Module, Services, Controllers, Model and DTO

13. Building the Task Management Sample App

- a. Implementing CRUD
- b. Implementing Searching & Filtering
- c. Validation & error Handling

14. Data Persistency Using PostgreSQL and TypeORM

15. Security: Authentication with Oauth2 and JWT

16. Security: Authorization

17. Logging: Monitoring your application

18. Manual testing with Postman

19. Unit Testing

20. Production Deployment

21. GraphQL & MongoDB

Projects:

- 1. Task Management System API
- 2. Social Media Platform API
- 3. E-Commerce Platform API
- 4. A Question & Answer Platform API

Course 6: Data Analysis, Science & Machine Learning

Level 1: Data Analysis Beginner

1. Excel

1. Excel Basics and Working with Cells and Worksheets
2. Calculate Your Data: sum, average, count, etc
3. Spreadsheet Functions to Organize Data
4. Functions such as the IF, nested IF, VLOOKUP and HLOOKUP functions in Excel.
5. More Excel formulas & Format your Workbook
6. Add Charts and Graphics and use of Pivot Table: Analyze your Data
7. Data Analysis toolkit

2. TABLEAU

1. Installing Tableau and Connect to your Excel data using Drag-and-Drop
2. Building your first dashboard in seconds, Basic Formatting and Print to PDF/Image
3. Simple Charts: Pie, Bars, Area and Lines and How to Filter your data with a few clicks
4. Aggregates: Calculating Totals, Average, Maximum, Minimum, etc.
5. How to connect to data using Live and Extract methods
6. Cleaning Data and Quick Table Calculations:
7. Build maps in seconds using the double-click method
8. Create forecasts using drag-and-drop and create interactive dashboards
9. Add data to another table (UNIONS) and combine two tables together using a common field (JOINS)
10. Create a Reference and/or Trend line anywhere on your visualization
11. Learn new visualizations such as Histograms, Funnels, Donuts, Dot Time, Jitter and more
12. Add additional views for Mobile and Tablet

Level 2: Data Analysis Intermediate

3. SQL

1. Introduction, PostgreSQL/MySQL Download & Install
2. SQL Basics, Tables & Data Types
3. DML: Select Statement For all Database Tables and Distinct
4. DDL: Create, Alter etc.
5. Where Clause (Operators used with Where Clause (AND & Where Clause + OR, Where Clause + LIKE, Where Clause + BETWEEN & IN, & AS)

6. Terms (LIMIT, ORDER BY, FETCH vs LIMIT, NOT IN, ISNULL & IS NOT NULL)
7. SQL Basics Challenge and Aggregations, COUNT(), SUM() Function , MIN() , MAX() & AVG() , CASE, NULLIF(), COALESCE()
8. Grouping & Ordering: GROUP BY & HAVING, SQL Conditional
9. CREATE TABLE & INSERT INTO TABLE
10. Designing a Database Schema for a project
11. Overview of Time Functions in PostgreSQL)
12. JOIN: UNION
13. SQL Sub-queries, SQL Sub-query + EXISTS OR ANY OR ALL
14. Common Table Expression, SQL Sub-query CTE Challenge
15. Math Function
16. Backup & Restore Database
17. Performance Optimization of Queries & Databases.

4. POWER BI

1. Introduction to Power BI (Examining Power BI Suite of Products, Identifying Differences Between Products, Understanding Power BI Updates, Installing Power BI Desktop, Exploring the Power BI Desktop Interface)
2. Utilizing File Types; PBIX vs PBIT, Examining Data Sources, Discussing Data Refresh, Understanding Data Types, Importing, Transforming, and Loading Data, Appending Operations
3. Working with Relational Data and Understanding Relationship
4. Importing from SQL Server Analysis Services Multidimensional and Tabular
5. Understanding the Issues with Merges, Grouping Options, Summarizing and Calculating
6. Creating Reports
7. Visualization tools (Matrix, Map, Card, Chart, Slicers, Tables)
8. Power BI Online (Introduction and publishing)
9. Creating Reports, Configuring Dashboards, Sharing Reports and Dashboards
10. Exploring Power BI Mobile

Level 3: Data Science

5. Python Programming

1. Intro (Brief history and applications of python)
2. Getting started (Installation of preferred IDLE)
3. Python Syntax (Indentation, Variables and Comments)
4. Simple Calculations in Python

5. Data Types and Casting
6. Strings (Accessing, Slicing, Length, Methods, Concatenation, Escape Characters)
7. Formatting String ++
8. Standard Module (Pip, Math's, Calendar, etc.)
9. Boolean, Operators
10. Python Collection/Arrays (List, Tuples, Sets, Dictionary)
11. Range function
12. User Input
13. Control Structures: If, Loop (while loop, for loop), Nesting, Pass etc.
14. Functions and Lambda
15. Working with NumPy & Pandas
16. Data Visualization with Matplotlib

Hands On Projects Across Disciplines:

1. Web Scraping Project
2. Covid Dataset
3. Airlines Dataset
4. Taxi Dataset
5. Shark Activities
6. Sales Dataset

Level 4: Machine Learning

1. Supervised Learning Overview
2. Evaluating Performance - Classification Error Metric, Regression Error Metrics
3. Machine Learning with Python (Scikit-Learn)
4. Linear Regression, with Python and Project Overview
5. Cross Validation and Bias-Variance Trade Off
6. Logistic Regression Theory, with Python
7. K Nearest Neighbor- Theory, With Python, Project
8. Decision Trees and Random Forest with Python, Overview and Project
9. Support Vector Machines with Python, Overview and Project
10. K Means Algorithm Theory, with Python, Project Overview
11. Principal Component Analysis Overview, With Python

12. Recommender System, Recommender Systems with Python
13. Natural Language Processing Theory, NLP with Python
14. Neural And Deep Learning
15. Deep Learning In-depth
16. Introduction To Artificial Neural Networks (ANN)
17. Downloading and Installing TensorFlow
18. Perceptron Model, Neural Networks, Activation Functions
19. Multi-Class Classification Considerations, Cost Functions and Gradient Descent
20. Backpropagation and TensorFlow Vs Keras
21. TF Syntax Basics - Part One - Preparing the Data, Training the Model, Model Evaluation
22. TF Regression Code Along - Exploratory Data Analysis, Data Preprocessing and Creating a Model, Eda and Preprocessing
23. TF Classification - Dealing with Overfitting and Evaluation
24. TensorFlow 2.0 Project Options Overview
25. Keras Project Solutions - Dealing with Missing Data, Categorical Data, Data Preprocessing
26. Keras Project Solutions - Creating and Training a Model, Model Evaluation
27. Tensorboard
28. Big Data and Spark with Python

Course 7: Agile Scrum Master (+ Certification):

...Not Yet Available

Course 8: Business Analysis (+ Certification)

...Not Yet Available

Course 9: Project management (Prince 2 + Certification)

...Not Yet Available

Course 10: User Interface Design (UI/UX)

...Not Yet Available

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+44 7308 748843