

VTU Virtual Internship Program



WEEK	DAY	Module	Module Name	Topic Name
Week 1	Day-1	Module-1	Python Programming-1	Introduction to Python and Basic Syntax
Week 1	Day-2			Control Structures
Week 1	Day-3			Functions
Week 1	Day-4			Data Structures
Week 1	Day-5			File Handling
Week 2	Day-6	Module-2	Python Programming-2	Modules, Libraries
Week 2	Day-7			Exception Handling
Week 2	Day-8			Object-Oriented Programming
Week 2	Day-9			Python programming with Databases
Week 2	Day-10			Hands-On Practice and Hands On Guided Project
Week 3	Day-11	Module-3	Prompt Engineering	Introduction to Prompt Engineering and AI Language Models
Week 3	Day-12			Crafting Effective Prompts
Week 3	Day-13			Prompt Engineering for Specific Applications
Week 3	Day-14			Ethical Considerations and Advanced Techniques
Week 3	Day-15			Hands-on Practice with AI Tools
Week 4	Day-16	Module-4	AI Coding Assistants	Introduction to AI-Powered Coding Assistants
Week 4	Day-17			AI-Powered Code Generation
Week 4	Day-18			Debugging and Code Optimization with AI
Week 4	Day-19			Advanced Features of AI Coding Assistants
Week 4	Day-20			Hands on practice with GitHub Copilot, Amazon Q, Google Gemini
Week 5	Day-21	Module-5	Linux Basics	Introduction to Linux and Basic Commands
Week 5	Day-22			User and File Permissions Management
Week 5	Day-23			Process Management and Shell Scripting Basics
Week 5	Day-24			Package Management and Disk Management
Week 5	Day-25			Networking Basics and System Monitoring
Week 6	Day-26	Module-6	Networking Essentials	Introduction to Networking
Week 6	Day-27			TCP/IP Model and IP Addressing
Week 6	Day-28			Subnetting and DHCP
Week 6	Day-29			Application Layer Protocol
Week 6	Day-30			Network Troubleshooting and Basic Security
Week 7	Day-31	Module-7	Databases	Introduction to SQL/NoSQL Databases
Week 7	Day-32			SQL Querying
Week 7	Day-33			Database Normalization & Indexing
Week 7	Day-34			NoSQL Databases
Week 7	Day-35			Hands-on Guided Project Using Python & MongoDB
Week 8	Day-36	Module-8	Web Development using Flask	Introduction to Flask and Application Setup
Week 8	Day-37			Working with Templates and Static Files
Week 8	Day-38			Handling Forms and User Input
Week 8	Day-39			Database Integration with Flask-SQLAlchemy
Week 8	Day-40			Authentication and Deploying Flask Applications
Week 9	Day-41	Module-9	Introduction to Cloud Computing	Introduction to Cloud Computing,Core Cloud Services
Week 9	Day-42			Core Cloud Services
Week 9	Day-43			Introduction to Cloud DevOps
Week 9	Day-44			Advanced Cloud Computing
Week 9	Day-45			Hands-on Guided Project & Career Pathways and Hands-On Labs
Week 10	Day-46	Module-10	Cloud Orchestration Platforms	Introduction to Cloud Orchestration - Kubernetes
Week 10	Day-47			GKE
Week 10	Day-48			EKS
Week 10	Day-49			AZURE
Week 10	Day-50			Run Web Application on each cloud platform
Week 11	Day-51	Module-11	Data Analysis	Introduction to Data Analysis and Tools
Week 11	Day-52			Data Cleaning and Preprocessing
Week 11	Day-53			Data Analysis Using SQL
Week 11	Day-54			Data Visualization Techniques
Week 11	Day-55			Advanced Data Analytics and Reporting
Week 12	Day-56	Module-12	Data Analytics with Power BI	Course Introduction and Overview of Power BI
Week 12	Day-57			Understanding Power BI Interface and Basics
Week 12	Day-58			Data Sources and Data Importing
Week 12	Day-59			Data Transformation with Power Query
Week 12	Day-60			Advanced Power Query & Sharing Insights
Week 13	Day-61	Module-13	Power BI Advanced Concepts	Data Modelling and Basic Visualization
Week 13	Day-62			Advanced Visualizations in Power BI
Week 13	Day-63			Introduction to DAX (Data Analysis Expressions)
Week 13	Day-64			Intermediate DAX
Week 13	Day-65			Data Refresh and Scheduling
Week 14	Day-66	Module-14	Machine Learning Models using PowerBI	Create a dataflow with the input data
Week 14	Day-67			Create and train a machine learning model
Week 14	Day-68			Review the model validation report
Week 14	Day-69			Apply the model to a dataflow entity
Week 14	Day-70			Using the scored output from the model in a Power BI report