

## Weekly Summary

### Week 1-2

**Linux fundamentals, scripting, introduction to cloud computing**

- SaltStack Research & Documentation
- Linux Fundamentals & Shell Basics Learning
- AWS EC2 Shell Scripting Tasks
- Linux Utilities & System Management Documentation
- Comprehensive Linux Guide Creation

### Week 3-4

**AWS setup, Docker basics, Docker Compose, Kubernetes fundamentals**

- Docker Architecture & Tools Guide Creation
- Git Tutorial Review & Workflow Understanding
- Kubernetes Architecture & Components Documentation
- Kubernetes Commands & Practical Skills Guide

### Week 5-6

**Kubernetes deployments, Minikube cluster, Git concepts**

- Kubernetes Deployment of Node.js App on EC2
- Nginx Web Server Deployment in Kubernetes
- CI/CD Pipeline Research & Documentation
- Jenkins Architecture & Pipeline Guide Summary

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### Week 7

**CI/CD concepts, Jenkins setup, Dockerized Node app, multibranch pipelines, Ansible fundamentals**

- Jenkins CI/CD Pipeline for Dockerized Node.js App
- Ansible Installation & Automation Guide Creation
- Ansible AWS Instance Setup Case Study (Windows & Linux)

### Week 8

**Advanced Ansible playbooks, AWS automation, SaltStack case-studies**

- Ansible Case Study: Linux Instances & Load Balancer Setup
- SaltStack Master-Minion Guide Creation
- SaltStack Automation: File & Service Management
- SaltStack NGINX Windows Service Deployment

### Week 9

**SaltStack setup, service orchestration, Salt-API integration with Jenkins**

- Setting up SaltStack Architecture with GitFS as file server
- Salt-API Integration with Jenkins via Ansible
- SaltStack Orchestration & Logging Documentation

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### Week 10

#### Jenkins Debugging, Terraform, GitLab CI/CD

- Jenkins Pipeline Debugging & Terraform Exploration
- GitLab CI/CD Pipeline for Django App Deployment
- AWS EC2 Provisioning with Terraform
- Salt Cluster Setup Automation & Kubernetes Concepts Review

### Week 11-12

#### Monitoring with Grafana, Prometheus, CloudWatch, Datadog, OpenTelemetry

- Grafana Dashboard Exploration & Visualization along with Prometheus
- Kubernetes Monitoring with OpenTelemetry & Node Exporter
- AWS CloudWatch Integration & Data Source Configuration
- CloudWatch Agent Deployment for Enhanced Metrics

### Week 13

#### Ansible Automation Platform, GCP experiments, Datadog monitors

- Exploration of Monitoring OSS & Ansible Troubleshooting
- Kubernetes Monitoring Tools Study & Grafana Dashboard Creation
- Server Resource Analysis & AlertManager/ OpenTelemetry Research
- Datadog Training & Process-Level Alert Monitor Setup

## Weekly Summary

### Week 14

#### AI workflows with n8n, Bedrock exploration, web scraping, RAG

- Red Hat Ansible Automation Platform (AAP) Review & Core Concepts
- AAP Deployment on AWS: Architecture & Features Study
- GCP Exploration & n8n Deployment via Docker

### Week 15

#### ML model deployment using Streamlit, Docker, AWS ECS Fargate

- GCP Infrastructure Provisioning with Terraform & Multi-Node Kubernetes Study
- n8n Workflow Orchestration & Dataset Support
- Linear Regression Model Training & Streamlit App Deployment on ECS Fargate

### Week 16

#### Amazon Bedrock Agent Development, RAG Pipeline Integration with n8n and Supabase

- Amazon Bedrock Exploration & Documentation
- Disease Data Scraping & n8n Workflow Setup
- Supabase Vector Storage & RAG Pipeline Creation
- PostgreSQL Functions, AI Agent Integration & WhatsApp Workflow Updates