**Project Name: Instacuts**

**Project Scope:** Continuous deployment with AWS Code pipeline along with code build and code deploy for continuous deployment for source code. Every time pipeline is triggered an Amazon Elastic Container Service (ECS) is deployed using AWS Fargate, by using Fargate you don't need to manage servers, handle capacity planning, or isolate container workloads for security. Fargate handles the infrastructure management aspects of your workload. You can schedule the placement of your containers across your cluster based on your resource needs, and availability requirements.

ECS manages [containers](https://www.techtarget.com/searchitoperations/definition/container-containerization-or-container-based-virtualization) and lets developers run applications in the cloud without having to configure an environment for the code to run in. It enables developers with AWS accounts to deploy and manage scalable applications that run on groups of servers called [clusters](https://searchdomino.techtarget.com/definition/application-clustering) through [API](https://www.techtarget.com/searchapparchitecture/definition/application-program-interface-API) calls and [task](https://www.techtarget.com/whatis/definition/task) definitions. Amazon ECS is a scalable service accessible through the [AWS Management Console](https://www.techtarget.com/searchaws/definition/AWS-Management-Console).

**Infrastructure:** Deployed by using Terraform (Infrastructure as a code) on AWS.

**Services used:**

1. Secret Manager for storing secret value like Database password
2. Virtual private cloud (VPC) for the complete Infra of Pie-Board
3. Mongodb to handle database through VPC peering
4. Virtual private network (VPN) to access private resources
5. EC2 instances to access ECS containers
6. Elastic container registry (ECR) to store docker images
7. Application Load balancers to handle traffic of applications
8. Security groups for allowing particular Ips
9. ECS task definition
10. ECS Clusters for micro services
11. Aws CloudFront and S3 bucket for static frontend hosting
12. WAF as a security tool
13. API gateways
14. Amplify for frontend web