

Cs-436 Report: Group 21

We have decided upon a social media implementation as our backend application. MongoDB is selected for data management due to its efficiency in handling large volumes of unstructured data, common in social media interactions. It is paired with Express and Node.js to create a robust backend environment that supports rapid development and handles asynchronous requests effectively. Google Cloud Storage hosts static and dynamic content, ensuring data durability and accessibility. Content delivery is globally enhanced through Cloud CDN, working alongside Google Cloud Load Balancing to efficiently distribute user traffic across application instances, optimizing global performance. Security is enforced through Google Cloud IAM, which manages access controls, and Google Cloud Armor, which provides robust firewall protection. Google Cloud Operations monitors the infrastructure's health and performance, while Google Cloud Build and Cloud Source Repositories facilitate continuous integration and deployment. This architecture provides a robust, scalable, and efficient framework for deploying a social media backend on GCP.

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Github Url: <https://github.com/yunuskrt/CS436-CloudComputingProject>