Technology Behind the Product

Frontend : Next.js
- Next.js uses server-side rendering (SSR) and static site generation (SSG) to **improve the performance**.
- Next.js applications are more **SEO-friendly**.
- Next.js applications are **more scalable** than traditional React applications.

Backend : GO [GoFiber framework] & FastAPI [ML Deployment]
- It can **handle millions** of requests per second with low latency and high throughput.
- GoFiber is **highly scalable** and can be deployed to a variety of platforms.

Database : MongoDB [NoSQL]
- It can be **scaled horizontally** by adding more servers to the cluster.
- MongoDB is very fast and can **handle high volumes** of traffic.
- MongoDB is **very flexible** and can be used to store a variety of data types, including structured, semi-structured, and unstructured data.

Cloud : Amazon Web Services
- Offers the broadest set of cloud services, which means that you can find the services you need to build and **deploy any type of application**.
- AWS has a global reach, with data centers located all over the world. This means that you can deploy your applications close to your users, which can improve **performance and reduce latency**.
- AWS is highly **scalable and reliable**.
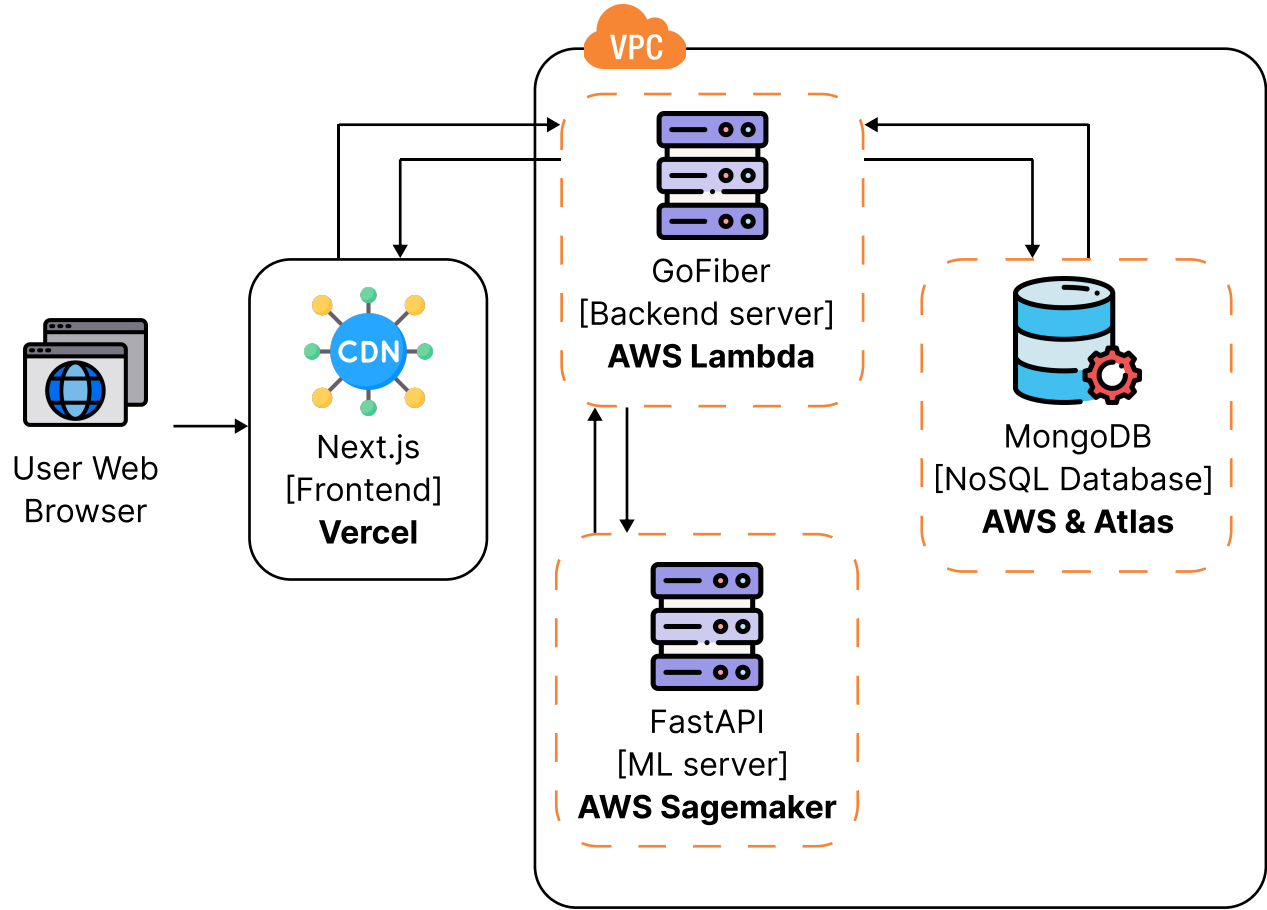
Machine Learning : PyTorch
- It allows you to build and train machine learning models using a **variety of techniques**, such as imperative programming, dynamic computation graphs, and eager or lazy evaluation.
- PyTorch is **very fast and performs well** on both CPUs and GPUs.

Expense Running the Product

Beta Stage

Beta Stage	Cost
Website - Vercel	Free
Backend - AWS Lambda	$0.20/1M requests
SageMaker	$0.10224/hr

Compute Optimized	vCPU	Memory
ml.c6g.xlarge	4	8 GiB

Database - MongoDB Atlas with AWS	$0.08/hr

Cluster Tier	Storage	RAM	vCPUs
M10	10 GB	2 GB	2 vCPUs

Total cost per day	approx $20/day

Beta Architecture

Expense on R&D is not included

There will be additional cost for training and testing the Machine learning models before deploying them on the servers. Mainly the cost will be on renting out GPU's for training. This cost will be just for initial development.

Team requirements

- Frontend Developer
- Backend Developer
- Cloud Developer
- Machine Learning Engineer

Important note: The plan and expense included in this document is limited to 1000 to 15000 users per month. Later there will increase in expense and also there may be changes in architecture to scale it for more users.