Ayoto

Problems

Problem 1

Unavailability of Preliminary Diagnosis Service

Anxiety

Delayed treatment

Inaccurate self-diagnosis

Problem 2

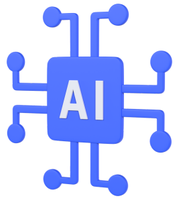
Difficulty Finding Suitable Doctors

Suboptimal treatment outcomes

Frustrating healthcare experience

Solutions

Solution 1



AI-Driven Preliminary Diagnosis

Our AI-driven solution provides users with a preliminary diagnosis service, utilizing advanced algorithms and medical knowledge. This empowers individuals to seek appropriate medical attention.

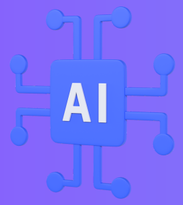
Solution 2

Personalized Doctor Recommendations

Utilizing an extensive dataset of specialized doctors, users can connect with doctors with expertise and experience to address their unique needs, enhancing their experience and access to specialized doctors.

Product

Our health startup offers a comprehensive range of innovative products and services that address the key challenges faced by individuals seeking preliminary medical diagnosis and accessing suitable doctors.

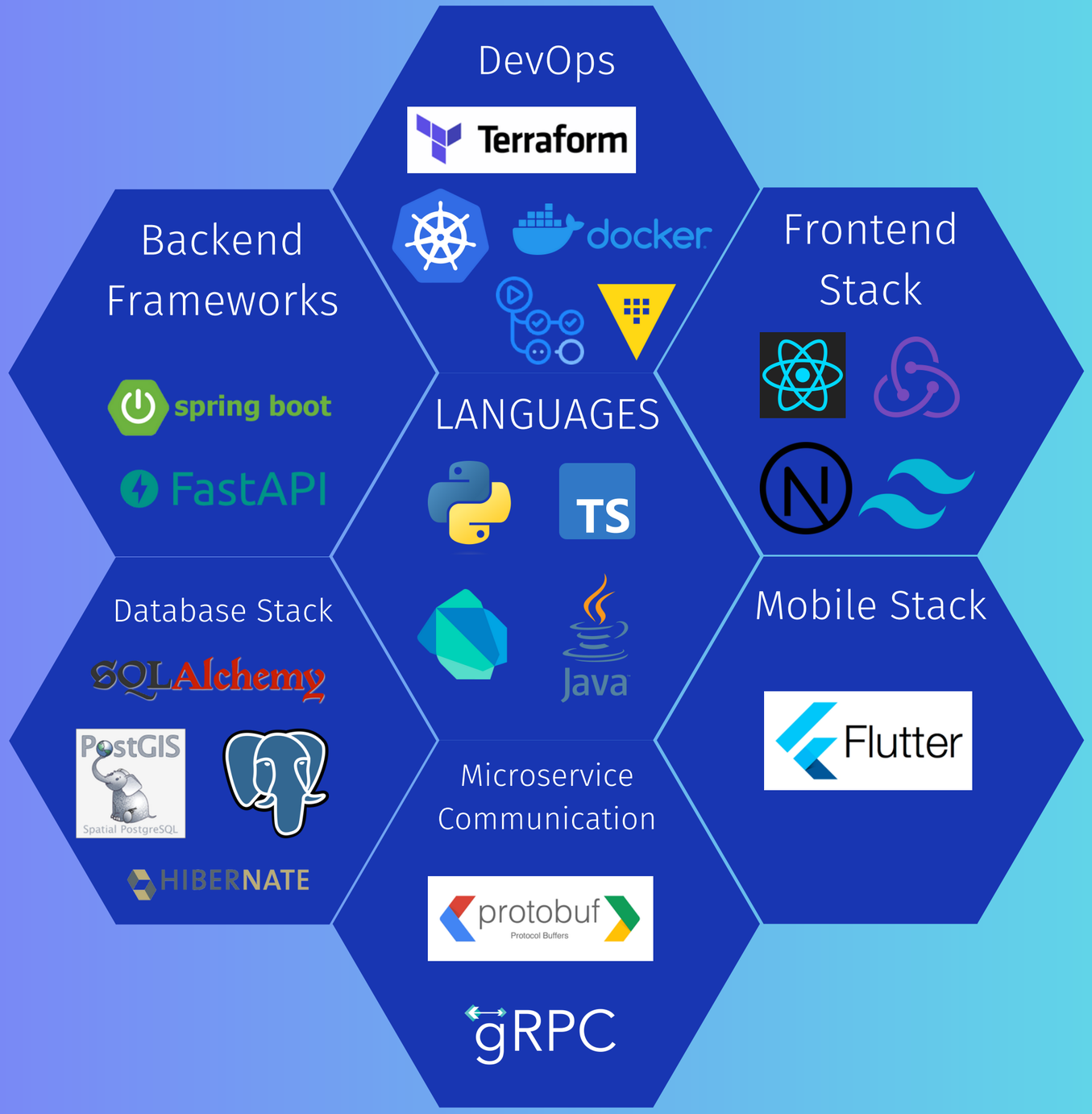


Preliminary Diagnosis Service

Doctor Discovery and Booking

Health Records Management

Technology Stack



Website Demo

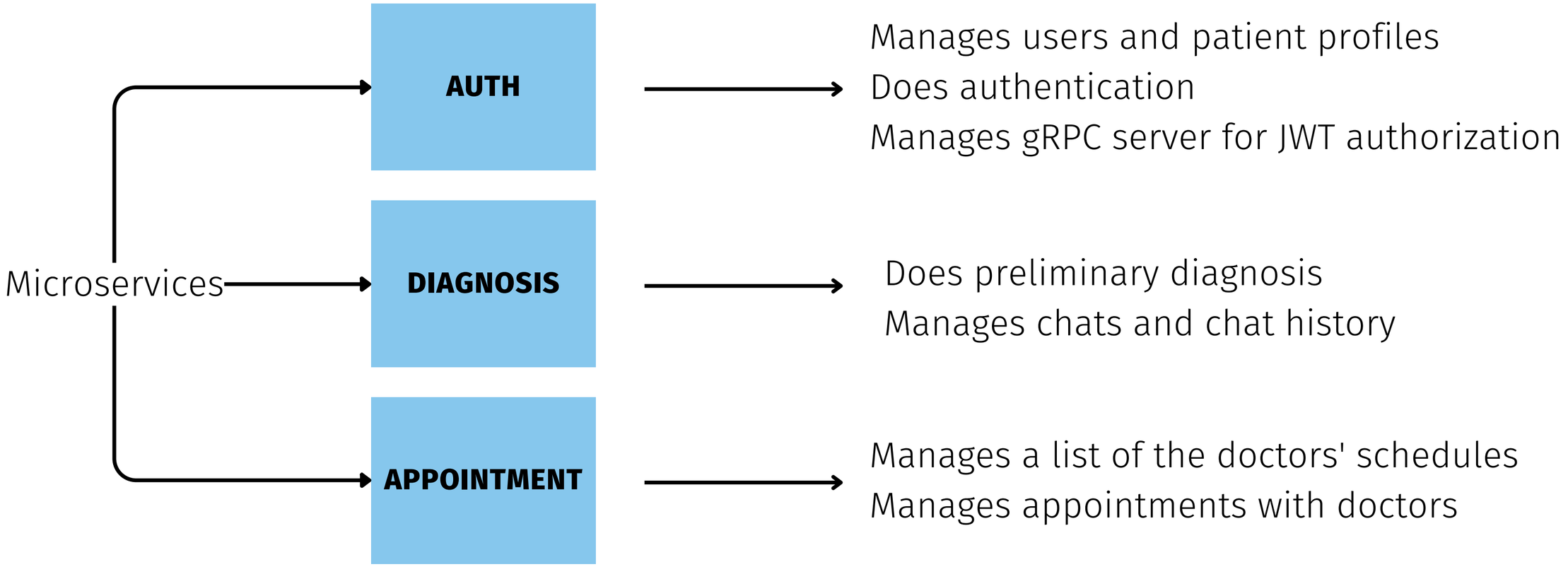
Website Demo

Mobile Application Demo

Mobile App Demo

BackEnd

Architecture



Utilities

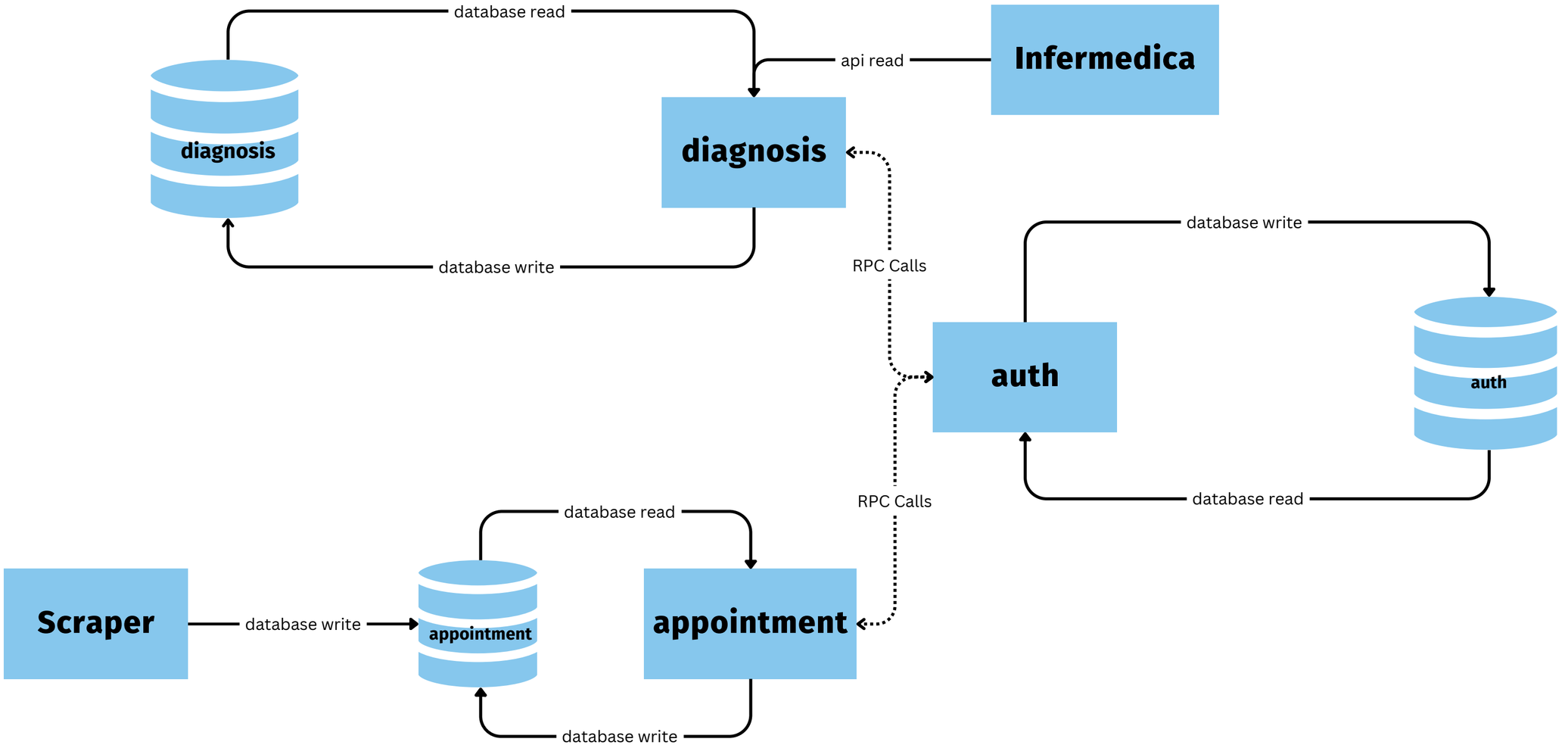
Scraper

→ Collects data about 1400 doctors in Bangladesh Data includes: names, specializations, schedules, etc.

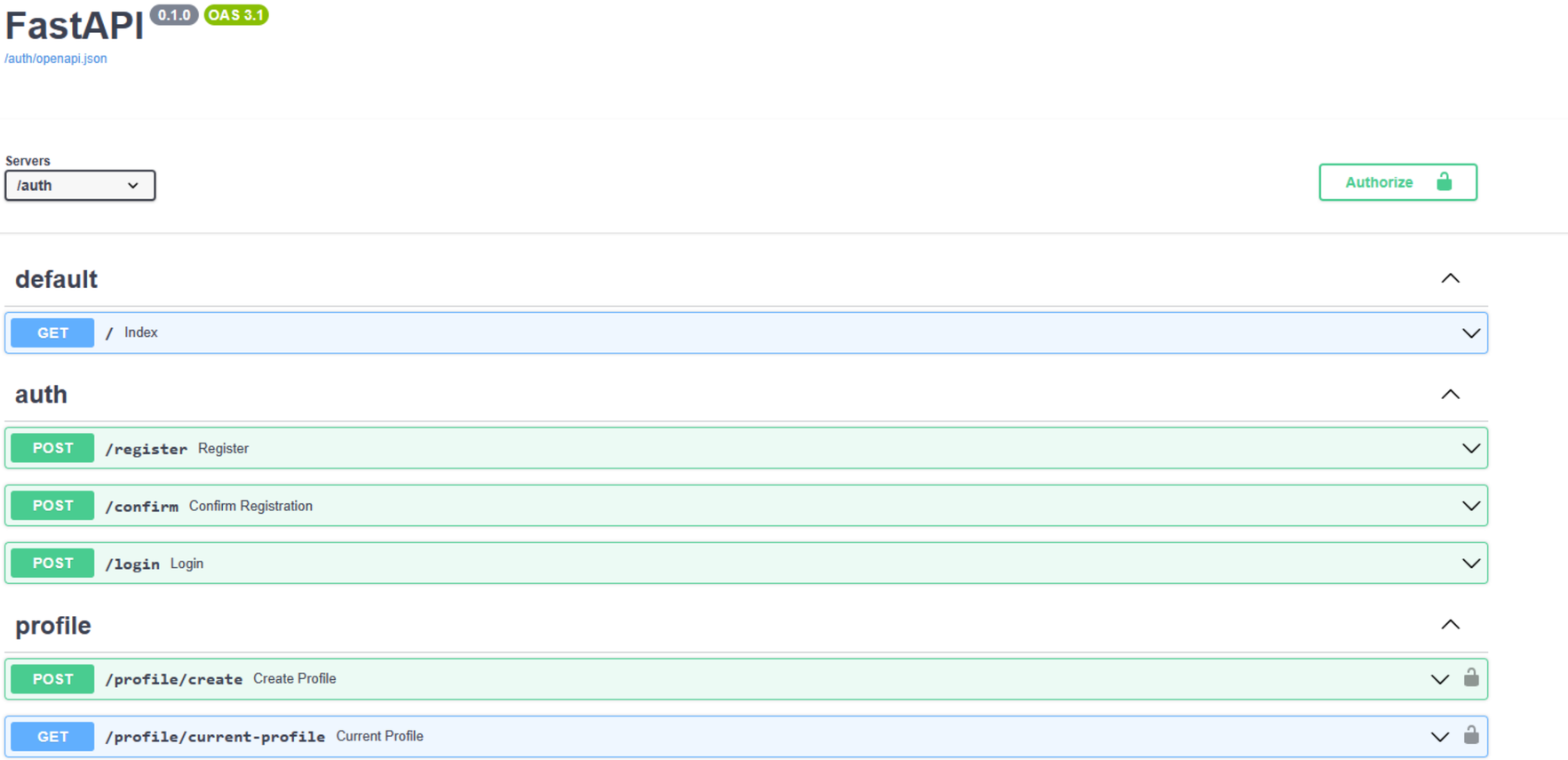
Python Infermedica Library

→ Provides abstraction for API calls to Infermedica endpoints
Manage states for the stateless Infermedica api

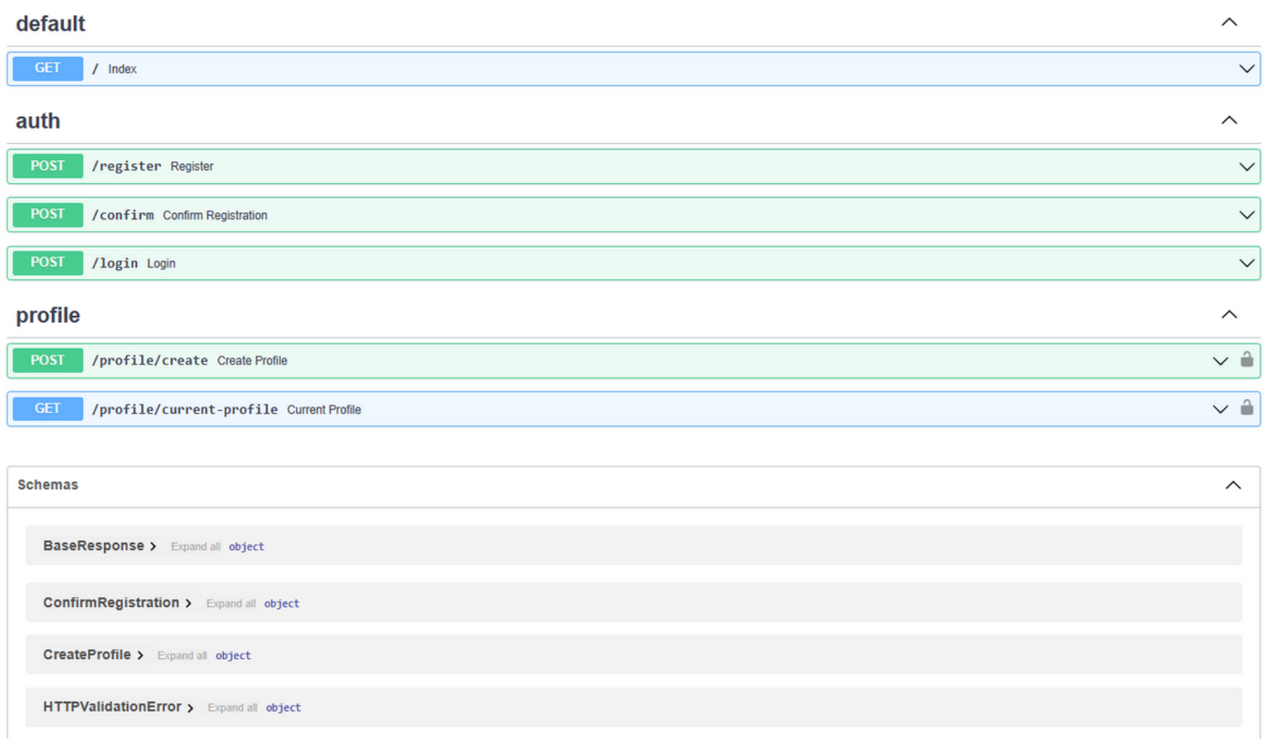
Component Diagram

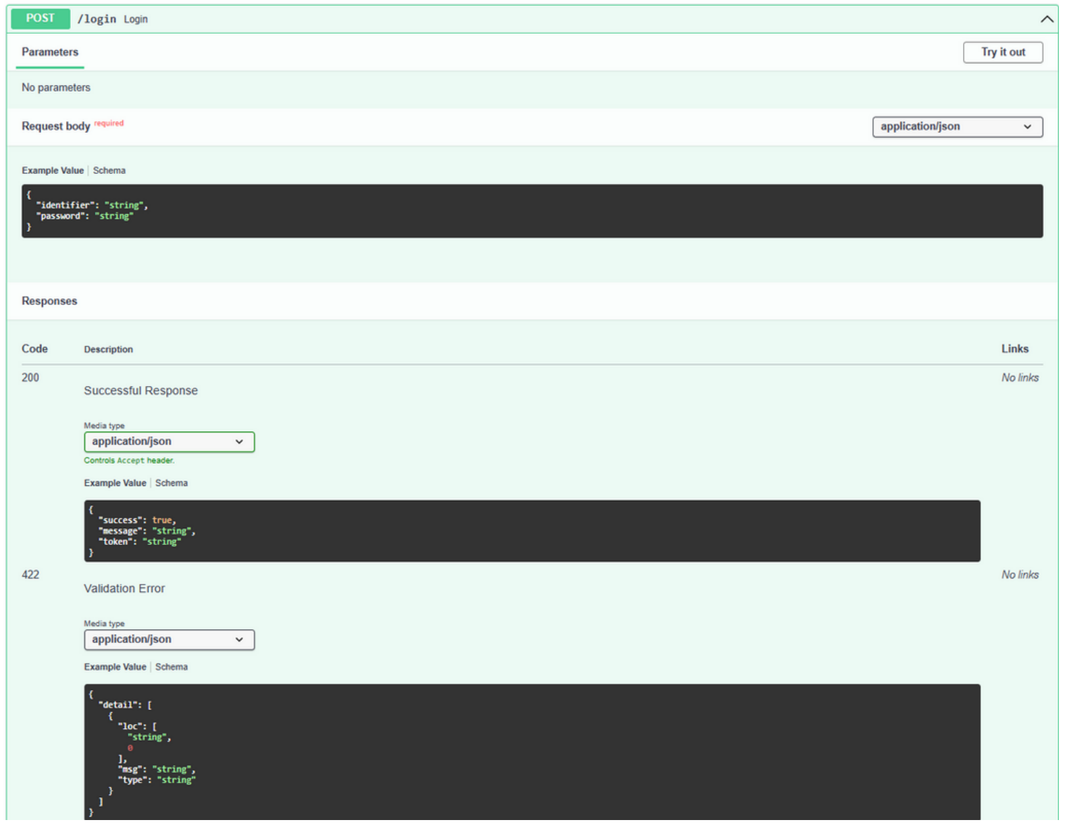


Swagger Documentation

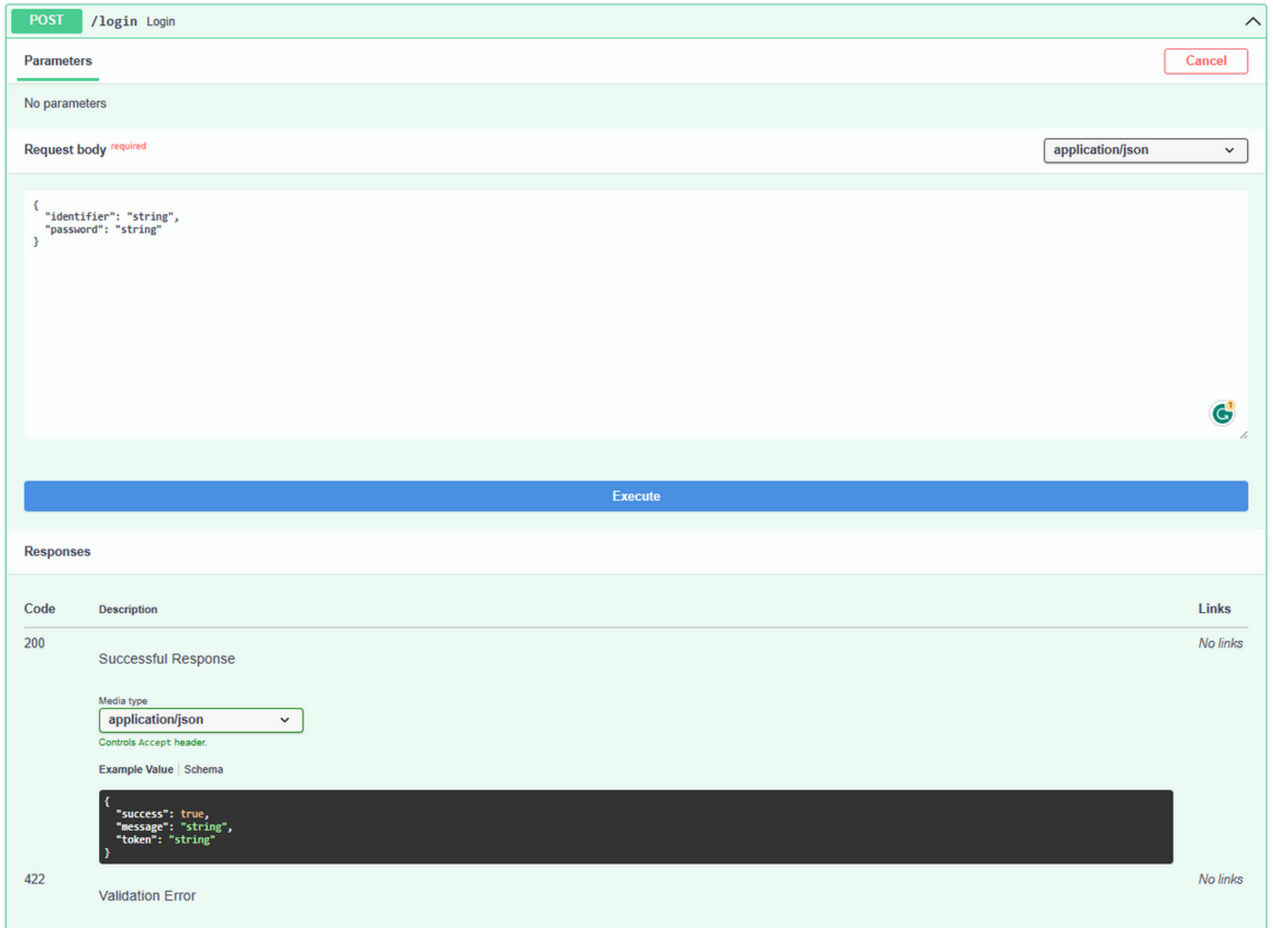


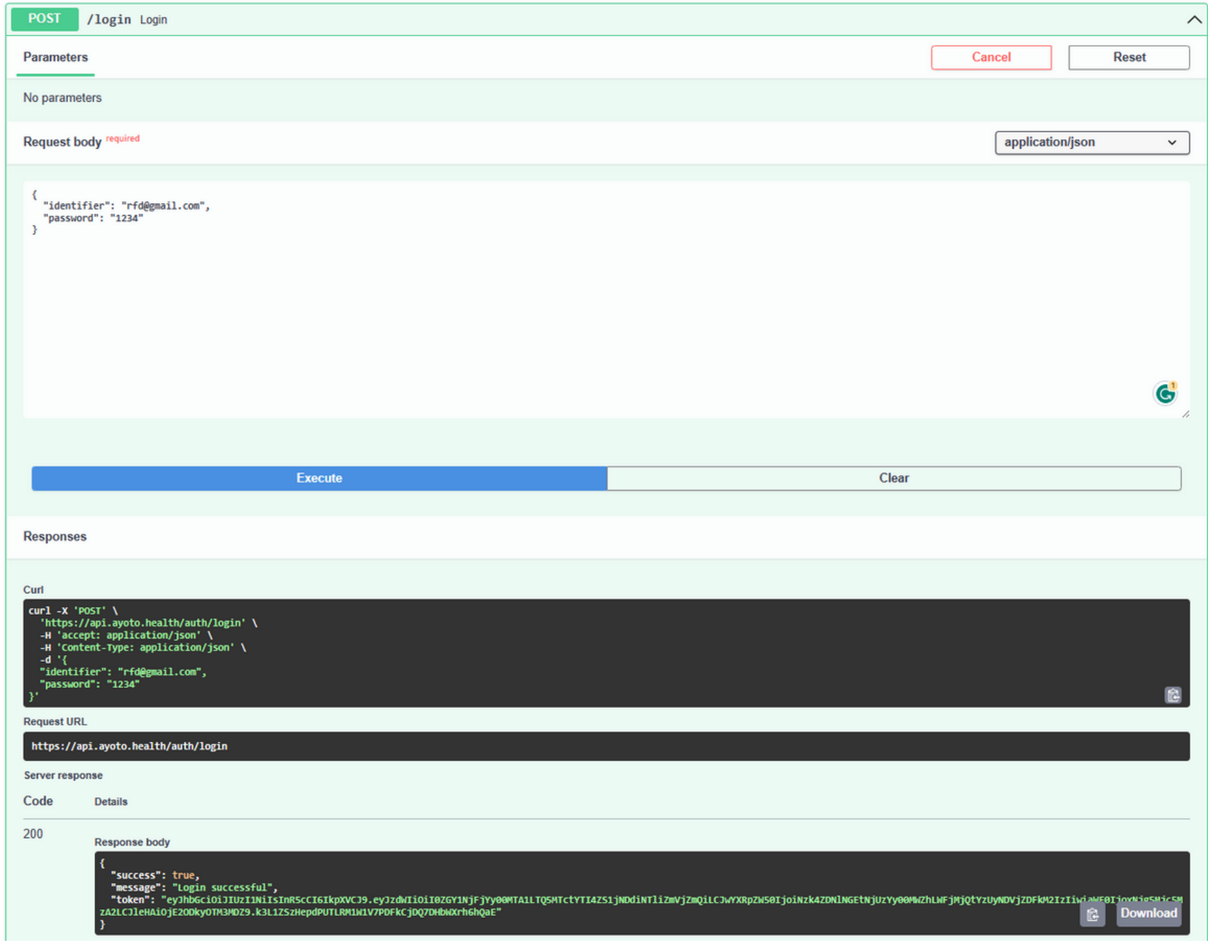
API Specification



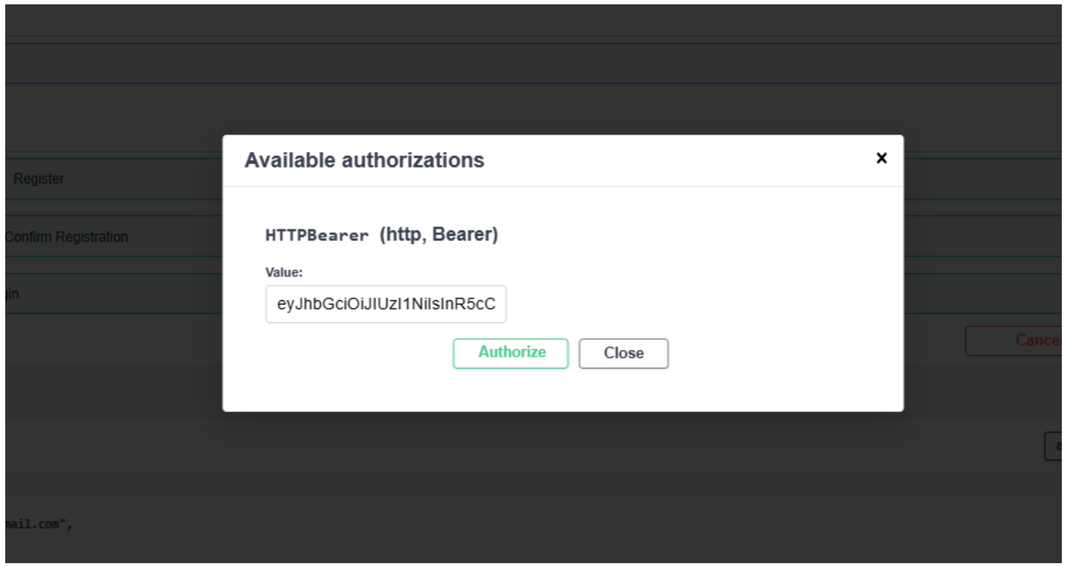


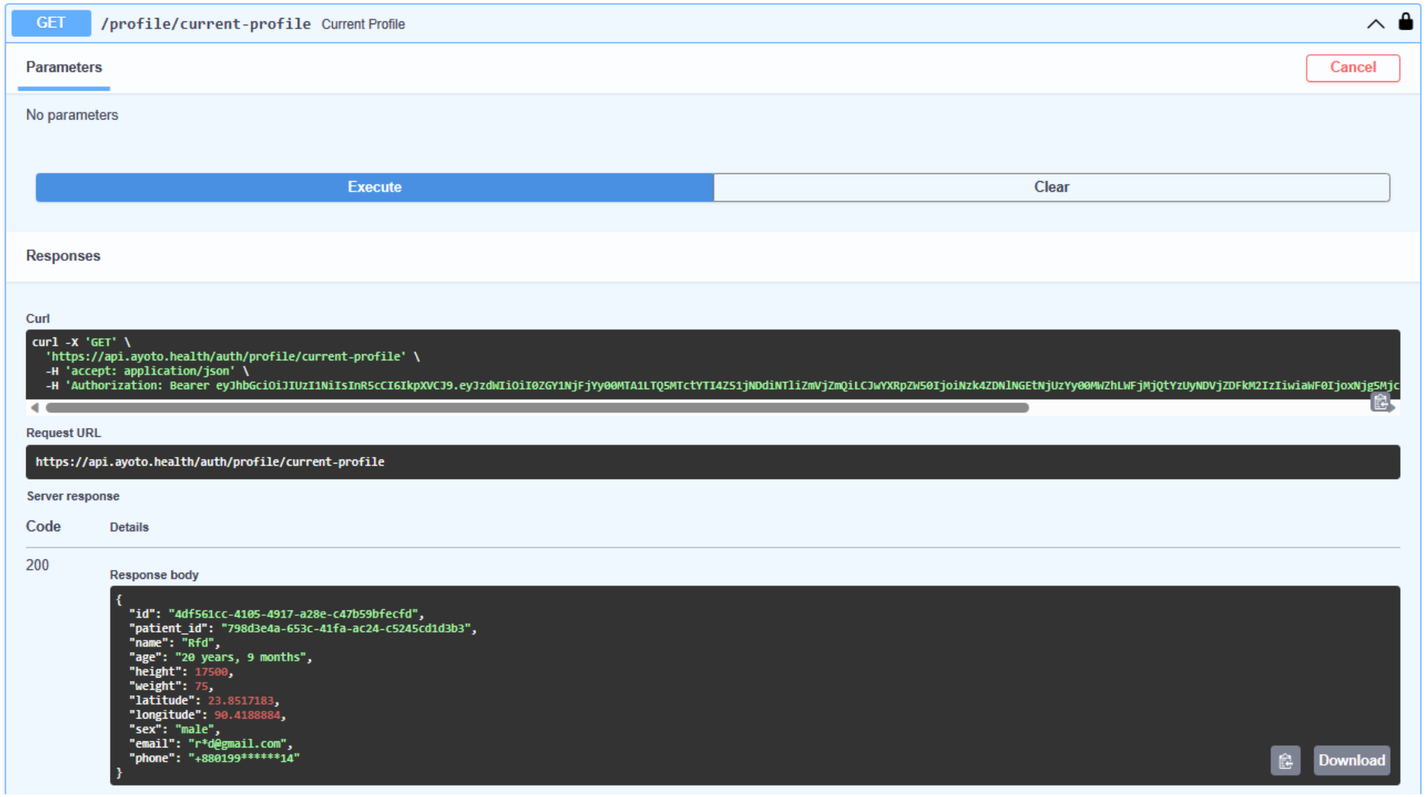
Interactivity





Authorization





Security and Privacy

Security

Secrets management on the deployment stage only (using Vault)
JWT tokens for authentication
SSL enabled for all subdomains
GRPC calls only within the cluster network
Protection against common cyber attacks (DDoS, path traversal, etc.)

Privacy

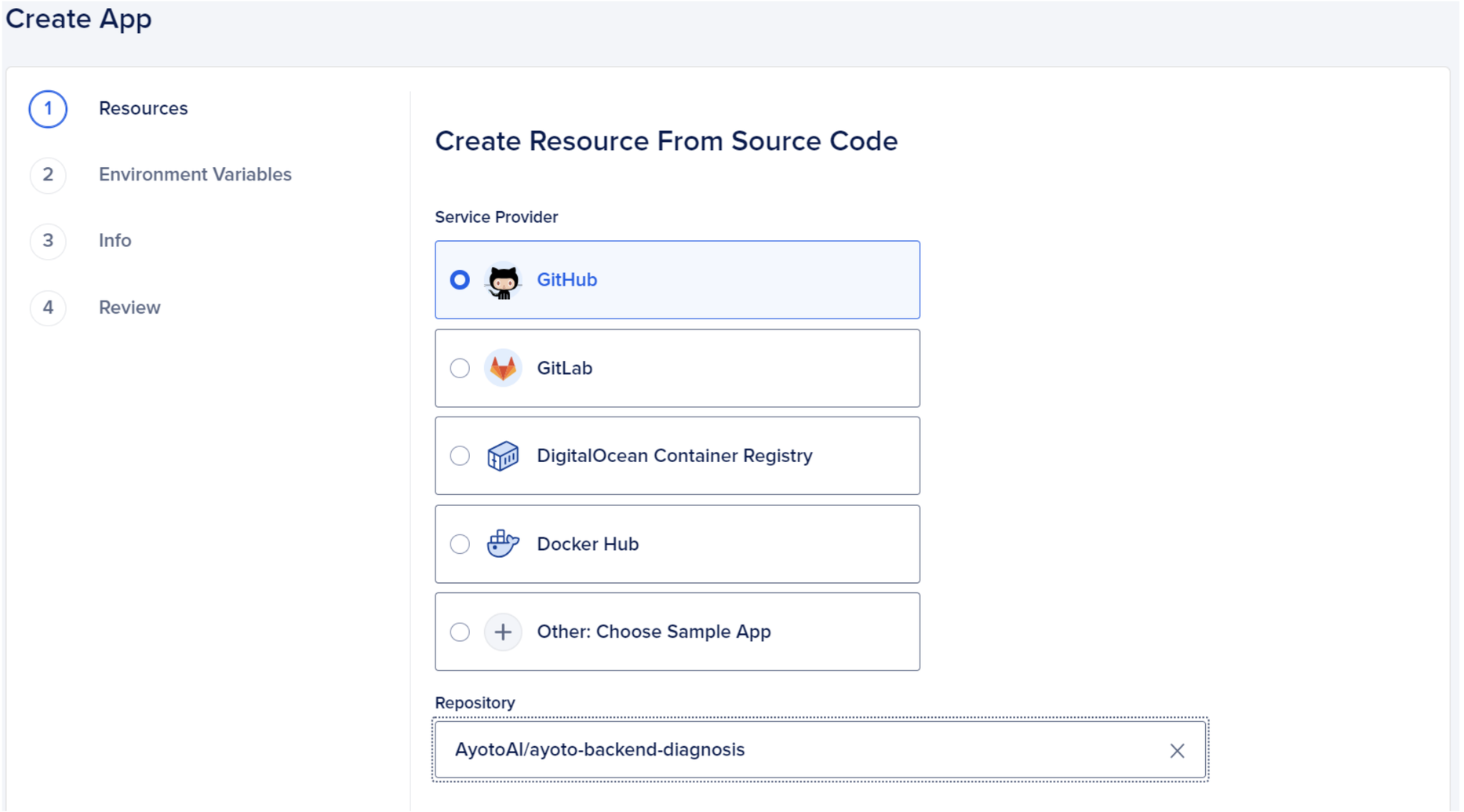
Compliant to GDPR and HIPAA

User data is pseudonymized
Automatic removal of chat history after 7 days
Short authorization token expiry time
Accurate personal data (excl. name) is never shown on the screen

DevOps

DigitalOcean Apps

DigitalOcean Apps



DigitalOcean Apps

~~Environment Variables~~

~~Info~~

4 Review

Name ayoto-backend-diagnosis Edit

Resource Type Web Service Edit

Python

Build Phase STEPS Edit

1 Python Buildpack v2.231.4

2 Procfile Buildpack v0.0.3

3 Custom Build Command Buildpack v0.1.1

No build command defined

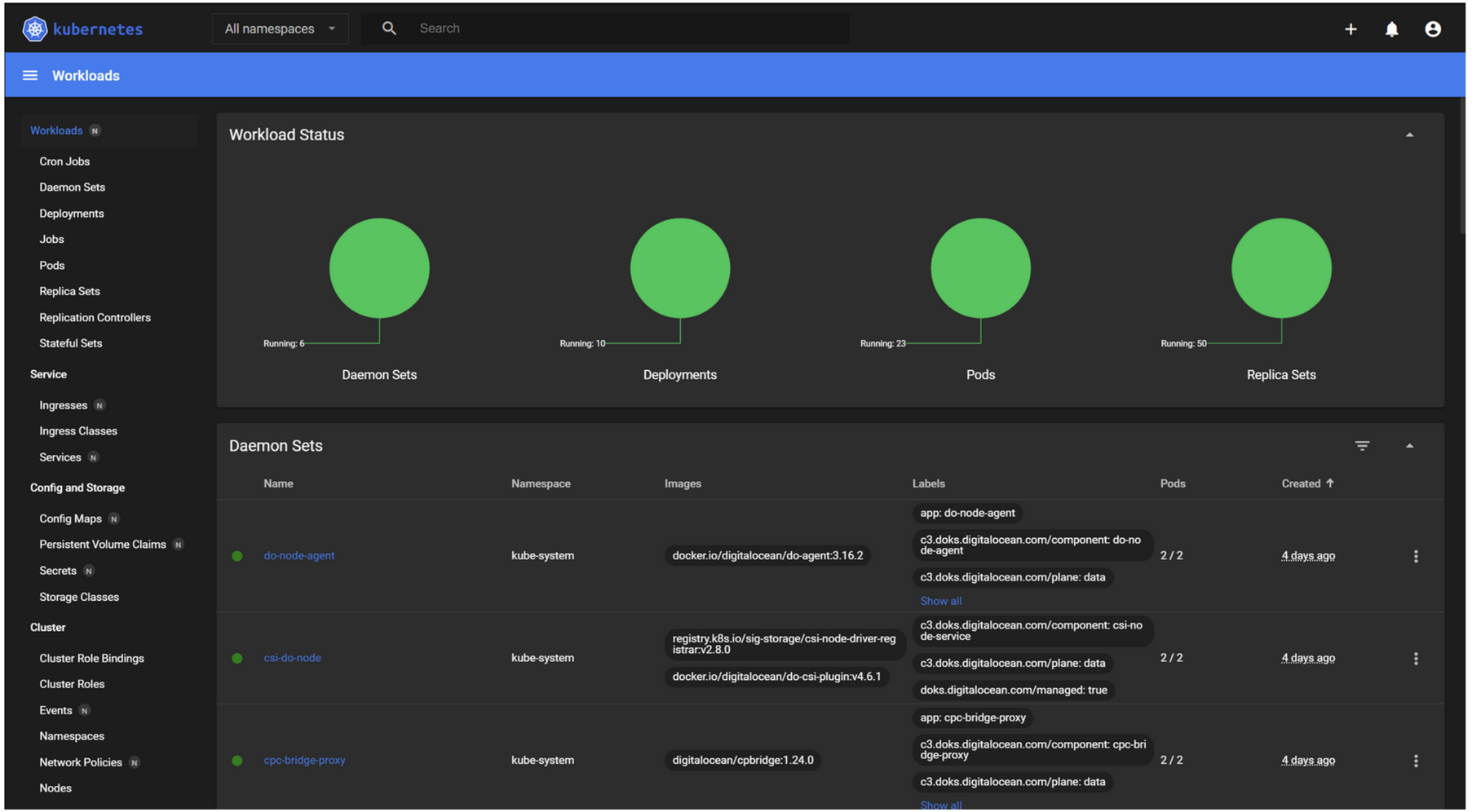
Run Command

Run Command

```
alembic upgrade head
uvicorn main:app --root-path /diagnosis --host
0.0.0.0 --port 8080
```

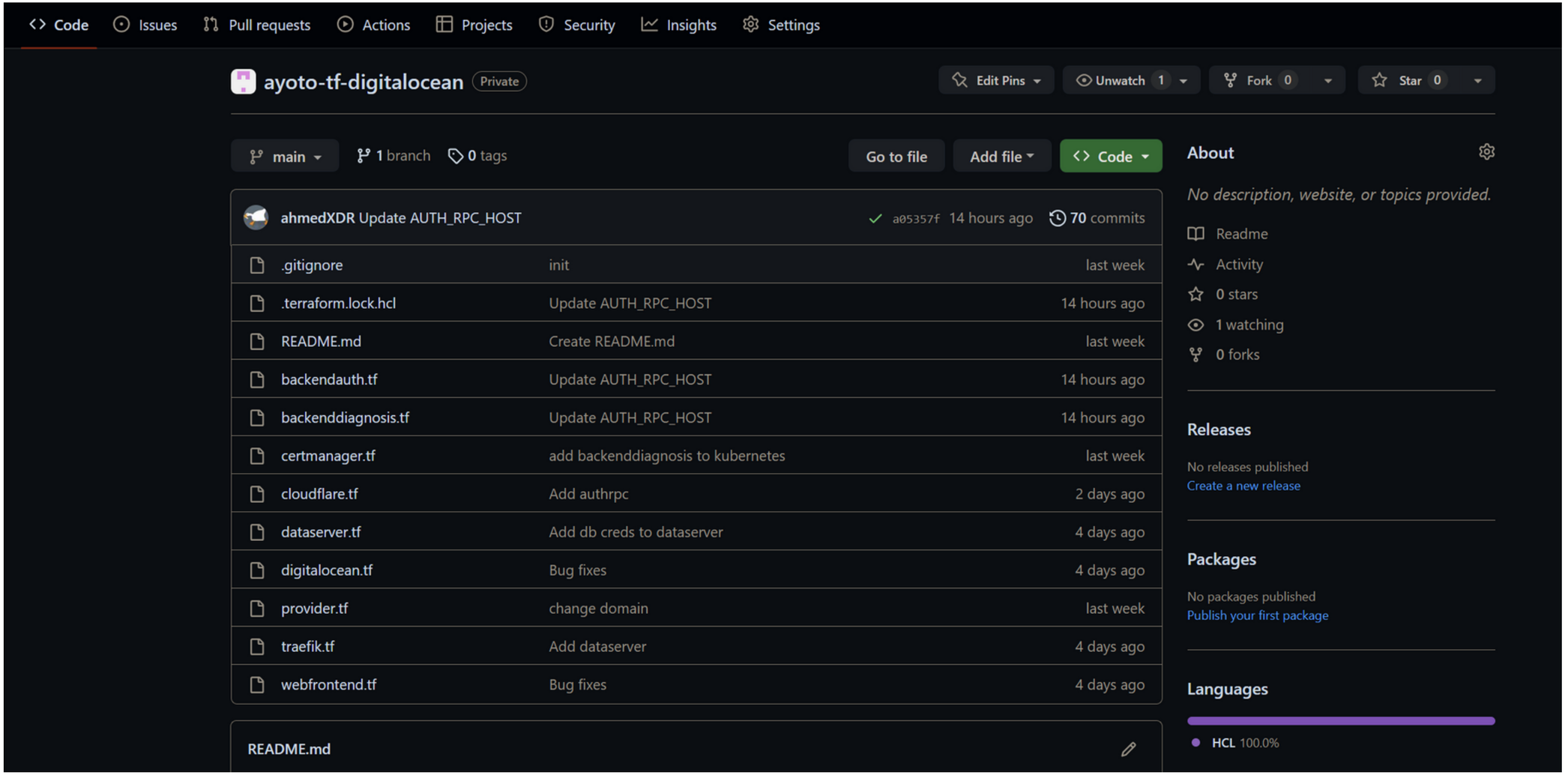
Kubernetes

Kubernetes

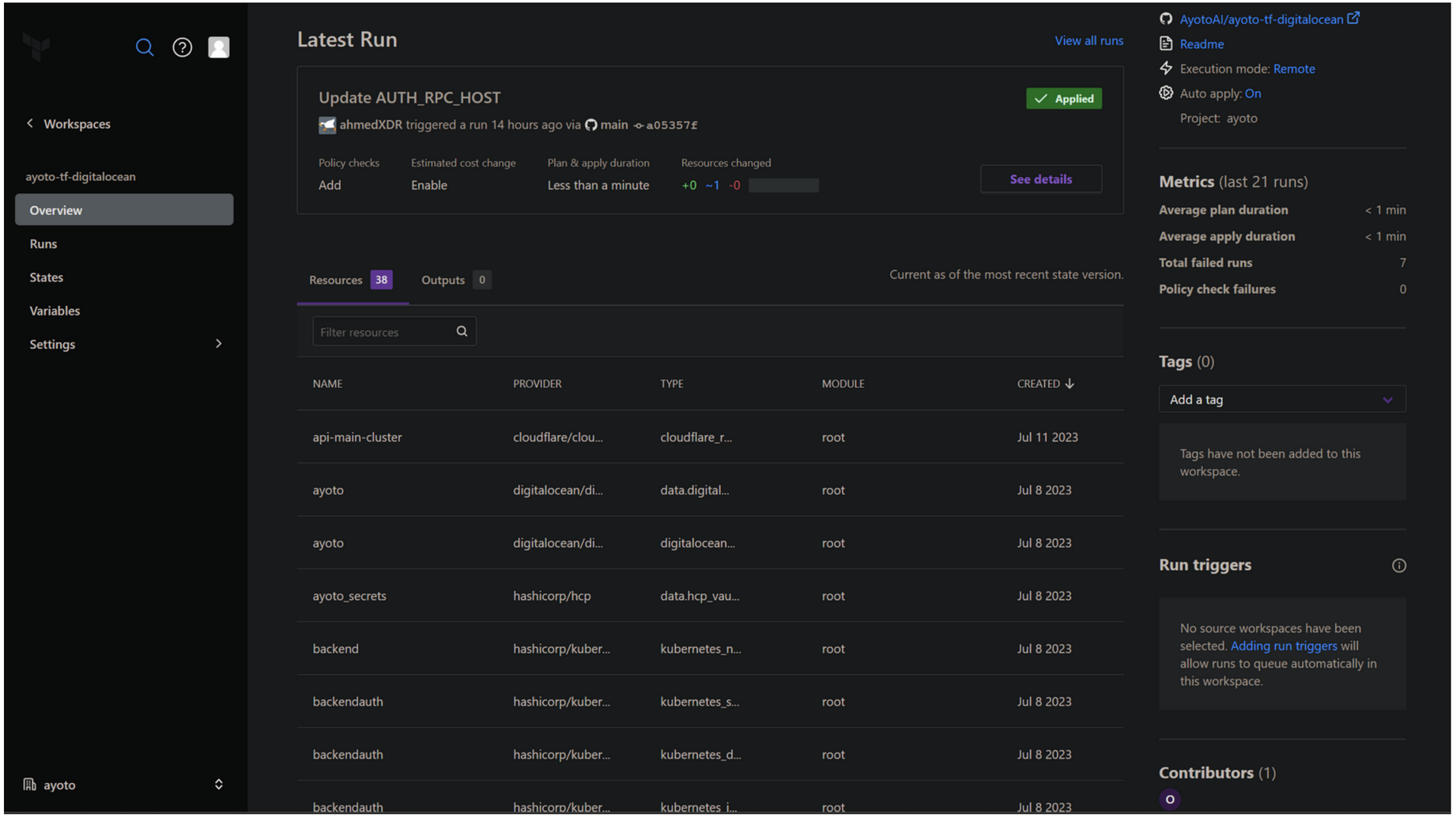

kubernetes
All namespaces
Search
Workloads
Workloads
Cron Jobs
Daemon Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Service
Ingresses
Ingress Classes
Services
Config and Storage
Config Maps
Persistent Volume Claims
Secrets
Storage Classes
Cluster
Cluster Role Bindings
Cluster Roles
Events
Namespaces
Network Policies
Nodes
Workload Status
Running: 6
Daemon Sets
Running: 10
Deployments
Running: 23
Pods
Running: 50
Replica Sets
Daemon Sets
Name
Namespace
Images
Labels
Pods
Created
do-node-agent
kube-system
docker.io/digitalocean/do-agent:3.16.2
app: do-node-agent
c3.doks.digitalocean.com/component: do-node-agent
c3.doks.digitalocean.com/plane: data
Show all
2 / 2
4 days ago
csi-do-node
kube-system
registry.k8s.io/sig-storage/csi-node-driver-registrar:v2.8.0
docker.io/digitalocean/do-csi-plugin:v4.6.1
c3.doks.digitalocean.com/component: csi-node-service
c3.doks.digitalocean.com/plane: data
doks.digitalocean.com/managed: true
2 / 2
4 days ago
cpc-bridge-proxy
kube-system
digitalocean/cpbridge:1.24.0
app: cpc-bridge-proxy
c3.doks.digitalocean.com/component: cpc-bridge-proxy
c3.doks.digitalocean.com/plane: data
Show all
2 / 2
4 days ago

Terraform

Terraform


Code
Issues
Pull requests
Actions
Projects
Security
Insights
Settings
ayoto-tf-digitalocean
Private
Edit Pins
Unwatch 1
Fork 0
Star 0
main
1 branch
0 tags
Go to file
Add file
Code
ahmedXDR Update AUTH_RPC_HOST
a05357f 14 hours ago
70 commits
.gitignore init last week
.terraform.lock.hcl Update AUTH_RPC_HOST 14 hours ago
README.md Create README.md last week
backendauth.tf Update AUTH_RPC_HOST 14 hours ago
backenddiagnosis.tf Update AUTH_RPC_HOST 14 hours ago
certmanager.tf add backenddiagnosis to kubernetes last week
cloudflare.tf Add authrpc 2 days ago
dataserver.tf Add db creds to dataserver 4 days ago
digitalocean.tf Bug fixes 4 days ago
provider.tf change domain last week
traefik.tf Add dataserver 4 days ago
webfrontend.tf Bug fixes 4 days ago
README.md
About
No description, website, or topics provided.
Readme
Activity
0 stars
1 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
Languages
HCL 100.0%

Terraform


Workspaces
ayoto-tf-digitalocean
Overview
Runs
States
Variables
Settings
ayoto
Latest Run
View all runs
Update AUTH_RPC_HOST
Applied
ahmedXDR triggered a run 14 hours ago via main a05357£
Policy checks
Add
Estimated cost change
Enable
Plan & apply duration
Less than a minute
Resources changed
+0 ~1 -0
See details
Resources 38
Outputs 0
Current as of the most recent state version.
Filter resources
NAME
PROVIDER
TYPE
MODULE
CREATED
api-main-cluster
cloudflare/clou...
cloudflare_r...
root
Jul 11 2023
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data.digital...
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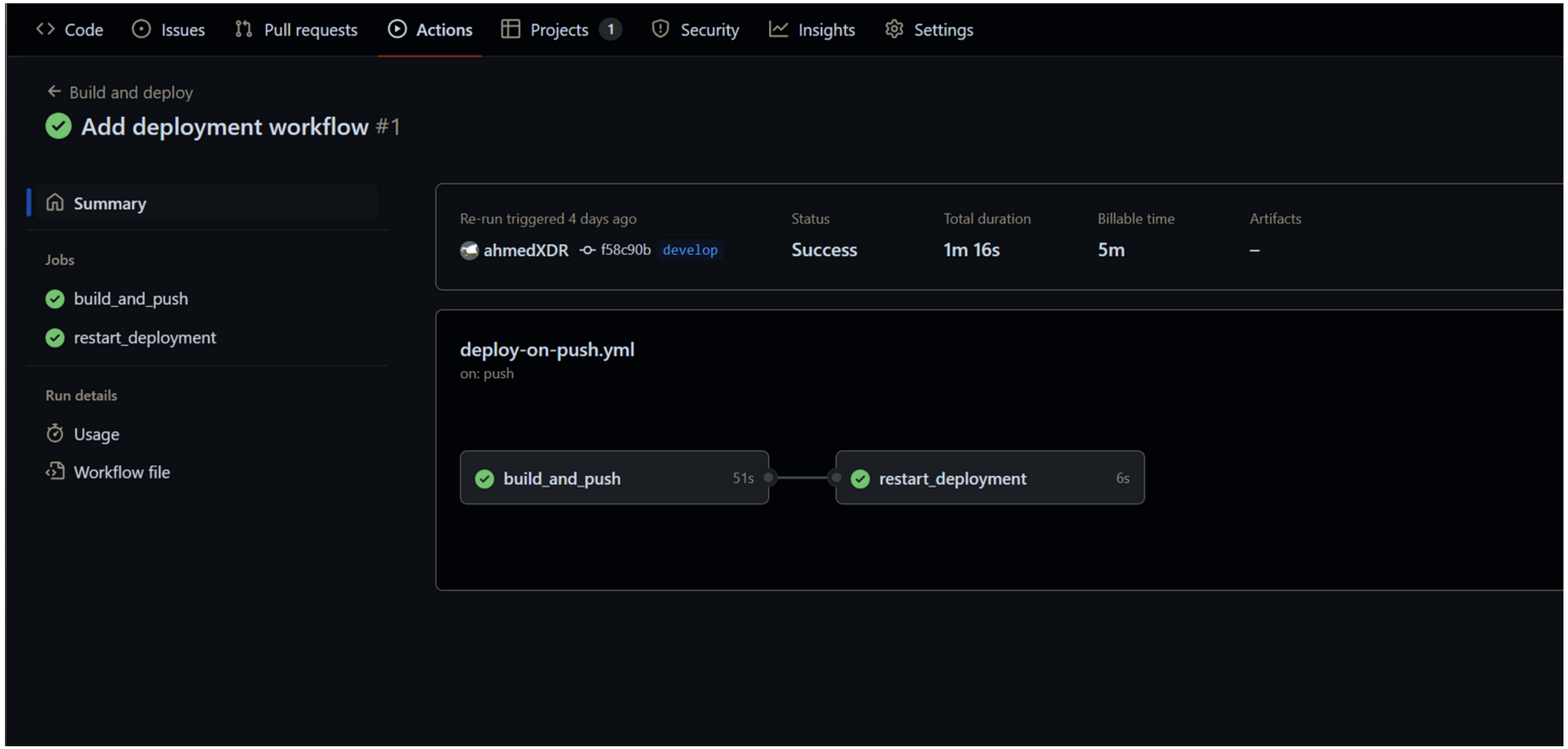
kubernetes_s...
root
Jul 8 2023
backendauth
hashicorp/kuber...
kubernetes_d...
root
Jul 8 2023
backendauth
hashicorp/kuber...
kubernetes_i...
root
Jul 8 2023
AyotoAI/ayoto-tf-digitalocean
Readme
Execution mode: Remote
Auto apply: On
Project: ayoto
Metrics (last 21 runs)
Average plan duration
< 1 min
Average apply duration
< 1 min
Total failed runs
7
Policy check failures
0
Tags (0)
Add a tag
Tags have not been added to this workspace.
Run triggers
No source workspaces have been selected. Adding run triggers will allow runs to queue automatically in this workspace.
Contributors (1)
O

GitHub Actions

GitHub Actions



Business Plan

Business Model

Customer Segments

Individual Users

We target individuals who require preliminary medical diagnosis and assistance in finding suitable doctors.

Corporate Clients

We also target corporate clients, including hospitals and individual doctors, who seek to provide value-added healthcare services to their customers.

Revenue Streams

Doctor Booking Fees

Percentage from the doctor and diagnosis appointment fees

Advertising and Sponsorships

We offer advertising opportunities to relevant stakeholders who want to reach our user base

Premium Accounts

Enhanced features and benefits
Subscription-based model, generating recurring revenue

Key Partnerships

Health Insurance Companies

Partnerships with health insurance providers to offer our services as part of their offerings, providing added value to their policyholders

Market Size

169.4 M

Total Available Market (TAM)

90 M

Serviceable Available Market (SAM)

35M

Serviceable Obtainable Market (SOM)

Direct Competitors

- Praava
- DoctorKoi
- Pulse
- Hia
- Lifeplus
- Doctime

Indirect Competitors

- Traditional Brick-and-Mortar Clinics
- General Health Information Websites

Competitive Advantages

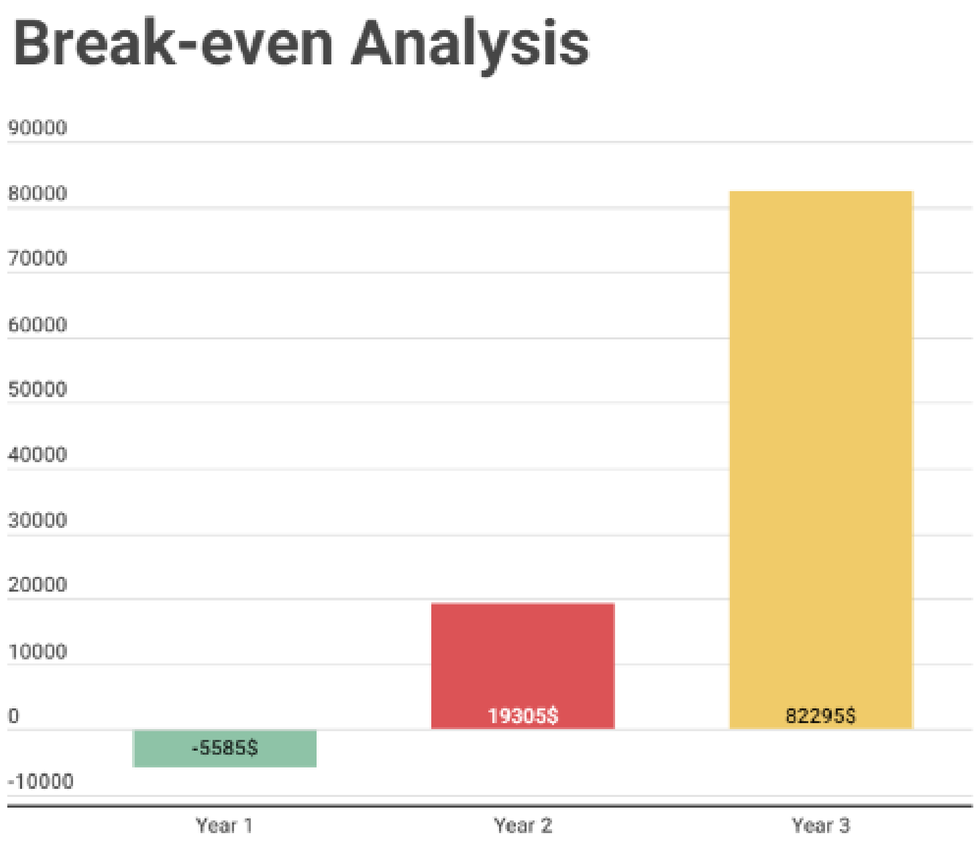
Advantage 1

AI-driven diagnosis: The game changer. Unprecedented in the country.

Advantage 2

Personalized doctor recommendations instead of generic doctor name lists.

Break-Even Analysis



The following table shows the projected profit and loss for the first 3 years:

Item	Year 1	Year 2	Year 3
Hosting and APIs	4,055$	2,530$	2,530$
Marketing	1,680$	1,680$	1,680$
Developing our own models	3,050$	0$	0
Total Expenses	**8,785$**	**4,210$**	**45,010$**
Total Revenue	3,200$	29,100$	108,000$
Profit	-5,585$	19,305$	82,295$

Expected Costs & Revenue of First 3 years

Year 1			
Item	**No. of Items**	**AVG. Price**	**Total**
Commission Per Visit	10000	0.3$	3,000$
Premium Accounts	100	2$	200$
Total			3,200$
Year 2			
Item	**No. of Items**	**AVG. Price**	**Total**
Commission Per Visit	75000	0.3$	22,500$
Advertisement	36	100$	3,600$
Premium Accounts	750	4$	3,000$
Total			29,100$
Year 3			
Item	**No. of Items**	**AVG. Price**	**Total**
Commission Per Visit	300000	0.3$	90,000$
Advertisement	60	100$	6,000$
Premium Accounts	3000	4$	12,000$
Total			108,000$

Item	Unit	No. of Units	No. of Items	Unit Price	Total
Team Salaries					
CEO	Month	12	1	500$	6,000$
COO	Month	12	1	400$	4,800$
Fronend web developer	Month	12	1	500$	6,000$
Backend Developer	Month	12	2	500$	12,000$
DevOps Engineer	Month	12	1	100$	1,200$
Mobile Developer	Month	12	2	450$	10,800$
Salaries Total					40,800$
Others					
Domain	Year	3	2	15$	90$
Web hosting & APIs	Month	36	1	200$	7,200$
PlayStore Account	Account	1	1	25$	25$
AppStore Account	Year	3	1	100$	300$
Infermedica API	API Call	3000	1	1$	1,500$
Paid Ads	Month	36	1	10$	360$
Graphics Freelancer	Month	36	1	30$	1,080$
Influencers Payment	Person	18	2	100$	3,600$
ML Engineer Payment	Model	2	1	450$	900$
High Performance GPUs	Month	3	1	50$	150$
Data Annotators	Month	4	5	100$	2,000$
Others Total					17,205$

Our Team

Mostafa Kira

Business Manager

Md Motasim Bhuiyan

PR Manager, Backend Developer

Zeyad Alagamy

Frontend Developer

Fedor Krasilnikov

Backend Developer

Ahmed Soliman

DevOps Engineer

Mohamed Nguira

Mobile Developer

Pavel Roganin

Mobile Developer

Acknowledgement

Abrar Auhin

Helped us to collect data about the market in Bangladesh

Mohamed Ayoub Chebbi

Helped us to make a beautiful design for our platform

Arnold Etaba

Helped us designing our database schema based on pseudonymization

Abdullah Al Noman

Helped us go through HIPAA and GDPR policies

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