

Modelos de datos

**RegistrationData:**  
String: username  
String: email  
String: password

**LoginData:**  
String: username or email  
String: password

**UpdateData:**  
String: username  
String: email  
String: password  
String: ProfilePicture

**AssociationData:**  
N: user\_id  
String: sensor\_uuid

**Reading:**  
String: associated\_uuid  
String: date\_time  
Double: gas  
Double: temperature  
String: position

**UserSensors:**  
N: user\_id

**GeoJSONPoint:**  
Literal: POINT  
List[float]: coordinates

**CreateTrack:**  
N: user\_id

**GetUserTracks:**  
N: user\_id

**DeleteTrack:**  
N: track\_id

**GetTrackPoints:**  
N: track\_id

**CreateTrackPoint:**  
N: track\_id  
GeoJSONPoint: position

**UserRewards:**  
N: user\_id

**ClaimReward:**  
N: reward\_id  
N: user\_id

API

POST: RegistrationData  
/v1/users/register

POST: LoginData  
/v1/users/login

PUT: UpdateData  
/v1/users/update

POST: UserSensors  
/v1/users/get\_sensors

POST: AssociationData  
/v1/data/bind

POST: Reading  
/v1/data/reading

POST: CreateTrack  
/v1/recorridos

DELETE: DeleteTrack  
/v1/recorridos

POST: CreateTrackPoint  
/v1/recorridos/puntos

POST: GetUserTracks  
/v1/recorridos/usuario

POST: GetTrackPoints  
/v1/recorridos/puntos\_recorrido

POST: UserRewards  
/v1/rewards

POST: ClaimReward  
/v1/rewards/claim

Logica negocio

String: username  
String: email  
String: password  
insert\_user()

JSON: user / Error

String: user or email  
String: password  
login\_user()

JSON: user / Error

String: username  
String: email  
String: password  
String: profilePicture  
update\_user()

JSON: user / Error

N: user\_id  
get\_user\_sensors()

JSON: sensors / Error

N: user\_id  
String: sensor\_uuid  
bind\_sensor\_to\_user()

JSON: sensor / Error

String: associated\_uuid  
String: date\_time  
Double: gas  
Double: temperature  
String: position  
add\_reading()

200 OK / Error

N: user\_id  
create\_track()

JSON: track\_id / Error

N: track\_id  
delete\_track()

JSON: track\_id / Error

N: track\_id  
\*: location  
create\_punto\_recorrido()

JSON: track / Error

N: user\_id  
get\_recorridos\_by\_user()

JSON: track / Error

N: track\_id  
get\_puntos\_recorrido()

JSON: points / Error

N: user\_id  
get\_user\_rewards()

JSON: rewards / Error

N: reward\_id  
N: user\_id  
claim\_reward()

200 OK / Error