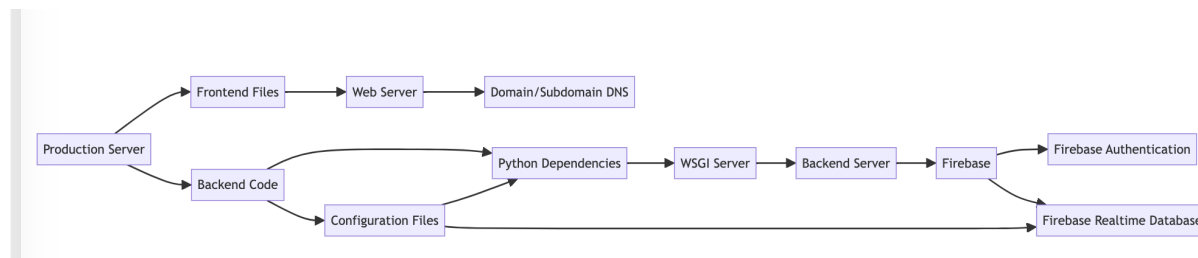


deployment.md

Deployment Guide

This deployment guide provides instructions on how to deploy your Realtime Pool Voting App to a production environment. The guide covers setting up the frontend, backend, and database components, as well as any necessary configurations or dependencies.



Prerequisites

Before proceeding with the deployment, ensure you have the following:

- A production server or hosting environment.
- A domain or subdomain for your application (e.g., `your-app-domain.com`).
- Access to the Firebase console to set up the database.

Frontend Deployment

1. Build the ReactJS frontend:

- Run `npm install` to install the project dependencies.
- Run `npm run build` to create a production-ready build of the frontend.

2. Serve the frontend files:

- Copy the contents of the `build` folder generated in the previous step to your production server or hosting environment.
- Configure your web server (e.g., Nginx, Apache) to serve the frontend files.
- Set up the necessary domain or subdomain DNS records to point to your server.

Backend Deployment

1. Set up the Python FastAPI backend:

- Copy your backend code to your production server or hosting environment.

2. Install the required Python dependencies:

- Create a virtual environment: `python3 -m venv venv`.
- Activate the virtual environment: `source venv/bin/activate`.
- Install the dependencies: `pip install -r requirements.txt`.

3. Configure the backend:

- Update the necessary configuration files (e.g., `config.py`) with your Firebase credentials and other environment-specific settings.

4. Run the backend server:

- Start the backend server using a production-ready WSGI server (e.g., Gunicorn): `gunicorn -w 4 -k uvicorn.workers.UvicornWorker main:app`.
- Ensure the backend server is accessible on the desired port (e.g., port 8000).

Database Setup

1. Set up Firebase:

- Create a Firebase project in the Firebase console.
- Enable the Firebase Authentication service and configure it to work with your frontend.
- Set up the Firebase Realtime Database and configure the necessary security rules.

2. Configure the backend to connect to Firebase:

- Update the backend configuration files with your Firebase project credentials (e.g., API key, project ID).

Final Steps

1. Test the deployment:

- Access your application using the configured domain or subdomain.
- Verify that the frontend is accessible and can communicate with the backend.

2. Monitor and maintain your application:

- Set up logging and monitoring tools to track the performance and health of your application.
- Regularly update and patch your application components to ensure security and stability.

Congratulations! Your Realtime Pool Voting App is now deployed to a production environment. Ensure you follow best practices for security, scalability, and performance optimization to provide a reliable and efficient voting experience for your users.