

Deploying Your Streamlit App: Step-by-Step Instructions

1. Deploy via GitHub + Streamlit Community Cloud

A. Prepare Your Repository

- Create a public GitHub repo (<https://github.com/>).
- Add all app files: `streamlit_app.py`, `requirements.txt`, `users.json`, etc.

B. Push Your Code

- In your app folder:

```
git init
```

```
git add .
```

```
git commit -m "Initial commit"
```

```
git branch -M main
```

```
git remote add origin https://github.com/YOURUSERNAME/YOURREPO.git
```

```
git push -u origin main
```

C. Deploy on Streamlit Cloud

- Visit <https://streamlit.io/cloud>.
- Sign in with GitHub.
- Click "New app", pick your repo, branch (main), and app file.
- Click "Deploy".
- Get your public app link.

2. Deploy via PythonAnywhere

A. Prepare your app as above.

B. Create account at <https://www.pythonanywhere.com/>.

C. Upload your files (via dashboard or using git clone).

D. In the "Consoles" tab, open Bash and install requirements:

```
pip install --user -r requirements.txt
```

E. On "Web" tab, set up a new app (Manual config).

- Note: Streamlit apps run best as always-on tasks, not as a full web app on PythonAnywhere.

3. Deploy via Render.com

A. Create account at <https://render.com>.

B. Click "New Web Service" > "Deploy from GitHub".

C. Select your repo.

- Build Command: `pip install -r requirements.txt`

- Start Command: `streamlit run streamlit_app.py --server.port 10000 --server.address 0.0.0.0`

D. Click "Create Web Service".

- Get your app link when build finishes.

4. Self-Hosting on Your Server (Linux Example)

A. SSH to server:

```
ssh user@your-server-ip
```

B. Install Python & pip if not present:

```
sudo apt update
```

```
sudo apt install python3 python3-pip
```

C. (Optional) Create a virtual environment:

```
python3 -m venv venv
```

```
source venv/bin/activate
```

D. Upload files (scp or git clone).

E. Install dependencies:

```
pip install -r requirements.txt
```

F. Run app:

```
streamlit run streamlit_app.py --server.port 8501 --server.address 0.0.0.0
```

G. (Optional) Use screen or tmux to keep running after logout.

H. (Optional) Set up a reverse proxy with Nginx/Apache for HTTPS/custom domain.

5. Docker Deployment

A. Create Dockerfile:

```
FROM python:3.9-slim
```

```
WORKDIR /app
```

```
COPY . /app
```

```
RUN pip install --upgrade pip
```

```
RUN pip install -r requirements.txt
```

```
EXPOSE 8501
```

```
CMD ["streamlit", "run", "streamlit_app.py", "--server.port=8501", "--server.address=0.0.0.0"]
```

B. Build image:

```
docker build -t my-streamlit-app .
```

C. Run container:

```
docker run -p 8501:8501 my-streamlit-app
```

The app will be on <http://localhost:8501> or <http://your-server-ip:8501>.

Tips:

- Protect users.json and sensitive files.
- For production, always use strong passwords and HTTPS.

- Official docs: streamlit.io/deploy, docs.render.com, docs.docker.com.