

Packaging & Deployment Guide

1. Backend → Azure

A. Containerize Your Python Service

1. Create Dockerfile:

```
FROM python:3.12-slim
WORKDIR /app
COPY requirements.txt .
RUN pip install --no-cache-dir -r requirements.txt
COPY . .
EXPOSE 8000
CMD ["uvicorn", "main:app", "--host", "0.0.0.0", "--port", "8000"]
```

2. Build & Test Locally:

```
docker build -t yourorg/aada-backend:latest .
docker run -e DATABASE_URL=... -e FIREBASE_CREDENTIALS=... -p 8000:8000 yourorg/aada-backend:latest
```

B. Push to Azure Container Registry (ACR)

```
az acr login --name YourRegistry
docker tag yourorg/aada-backend:latest YourRegistry.azurecr.io/aada-backend:latest
docker push YourRegistry.azurecr.io/aada-backend:latest
```

C. Deploy on Azure App Service

```
az appservice plan create --name AadaPlan --is-linux --sku B1
az webapp create \
  --resource-group YourRG \
  --plan AadaPlan \
  --name aada-backend-app \
  --deployment-container-image-name YourRegistry.azurecr.io/aada-backend:latest
az webapp config appsettings set \
  --name aada-backend-app --resource-group YourRG \
  --settings DATABASE_URL="..." FIREBASE_CREDENTIALS="/app/keys.json"
```

D. Scheduling & Functions

- Use Azure Functions Timer Triggers for:
 - * Monthly seeder: seed_invoices_local.py on cron '0 0 1 * *'
 - * Daily reminders: push_reminders.py on cron '0 9 * * *'

2. Mobile App → TestFlight

A. Xcode Project Setup

1. Set Bundle Identifier (e.g. com.yourorg.AADA)
2. Enable Push Notifications in Signing & Capabilities
3. Configure App Icon & Launch Screen assets

B. Archive & Upload

1. Product → Scheme → Release
2. Product → Archive
3. Distribute App → App Store Connect → Upload

C. TestFlight Configuration

- In App Store Connect:
 - * Internal Testing: add team members
 - * External Testing: create groups, add emails, submit for Beta Review

D. (Optional) Fastlane Automation

1. Install: gem install fastlane
2. fastlane init in ios directory
3. Add lane :beta do ... end for build and upload
4. Run: fastlane beta

3. Monitoring & CI/CD

- Backend: Application Insights, Log Stream
- Mobile: Xcode Organizer (Crashes) or Firebase Crashlytics
- CI/CD: GitHub Actions to build, push images, deploy, and trigger Fastlane