

📁 PROJECT MAP - Your Navigation Guide

🏁 START HERE!

YOU ARE HERE → START_HERE.md (This gives you the big picture)



Choose Your Path:



Quick Demo Learning Experiment
(30 min) (6 weeks) (Ongoing)

📘 Documentation Files (Read in Order)

1 START_HERE.md ★ READ THIS FIRST

- Project overview
- What you have
- What you'll learn
- Immediate next steps
- Success metrics

2 QUICKSTART.md

- Step-by-step setup (30 min)
- Test each service
- Docker commands
- Jenkins installation
- Verification checklist

3 ARCHITECTURE.md

- Visual diagrams
- System overview
- Data flow
- Service communication
- Design decisions

4 LEARNING_ROADMAP.md

- 6-week structured plan
- Daily tasks
- Learning objectives
- Exercises

- Mastery checklist

5 README.md

- Technical reference
- API documentation
- Commands reference
- Troubleshooting
- Advanced topics

Code Structure

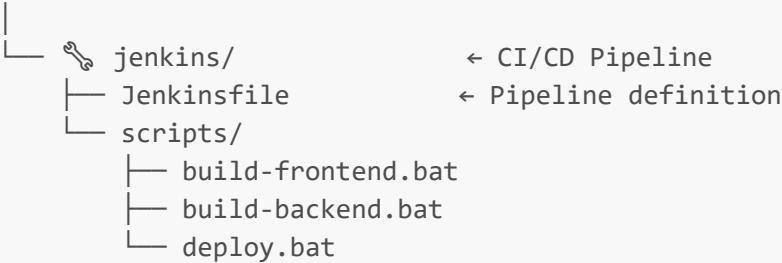
```
portfolio-microservices/
├── START_HERE.md      ← Begin here!
├── QUICKSTART.md      ← Setup guide
├── ARCHITECTURE.md    ← Diagrams
├── LEARNING_ROADMAP.md ← 6-week plan
└── README.md          ← Reference

├── docker-compose.yml  ← Run all services
├── docker-compose.dev.yml ← Development mode
└── .gitignore

└── frontend/           ← Next.js Service
    ├── src/
    │   ├── app/
    │   │   ├── page.js      ← Main portfolio page
    │   │   ├── layout.js    ← Root layout
    │   │   └── globals.css  ← Styles
    │   └── components/
    │       └── ContactForm.js ← Contact form
    ├── Dockerfile          ← Frontend image
    ├── next.config.js
    └── package.json

└── backend/             ← Express API Service
    ├── src/
    │   ├── index.js        ← Server entry
    │   ├── routes/
    │   │   └── contact.js  ← API routes
    │   ├── controllers/
    │   │   └── contactController.js ← Logic
    │   └── data/
    │       └── contacts.json ← Storage
    ├── Dockerfile          ← Backend image
    └── package.json

└── nginx/               ← Reverse Proxy
    ├── nginx.conf         ← Routing rules
    └── Dockerfile          ← Nginx image
```



🔗 Quick Access Guide

Want to...

Understand the project? → Read START_HERE.md

Get it running quickly? → Follow QUICKSTART.md

See how it works? → Check ARCHITECTURE.md

Learn systematically? → Follow LEARNING_ROADMAP.md

Find specific commands? → Check README.md

Modify the frontend? → Edit frontend/src/app/page.js

Modify the API? → Edit backend/src/controllers/contactController.js

Change routing? → Edit nginx/nginx.conf

Modify CI/CD? → Edit jenkins/Jenkinsfile

Run everything? → docker-compose up --build

📝 Common Workflows

Workflow 1: First Time Setup

1. Read START_HERE.md
2. Follow QUICKSTART.md Step 1-4
3. Test the application
4. Celebrate! 🎉

Workflow 2: Learning Mode

1. Read LEARNING_ROADMAP.md
2. Follow Week 1 tasks
3. Complete exercises
4. Move to Week 2
5. Repeat until mastery

Workflow 3: Development

1. Make code changes
2. Test locally (`npm run dev`)
3. Build Docker image
4. Test in container
5. Commit changes
6. Trigger Jenkins build
7. Verify deployment

Workflow 4: Troubleshooting

1. Check error message
2. View container logs (`docker logs`)
3. Check `README.md` troubleshooting
4. Search Stack Overflow
5. Review `ARCHITECTURE.md`
6. Ask for help

File Importance Matrix

Critical (Must Understand)

- ★★★ START_HERE.md
- ★★★ docker-compose.yml
- ★★★ frontend/Dockerfile
- ★★★ backend/Dockerfile
- ★★★ jenkins/Jenkinsfile

Important (Should Understand)

- ★★ QUICKSTART.md
- ★★ ARCHITECTURE.md
- ★★ nginx/nginx.conf
- ★★ frontend/src/app/page.js
- ★★ backend/src/index.js

Reference (Good to Know)

- ★ LEARNING_ROADMAP.md
- ★ README.md
- ★ Jenkins scripts
- ★ Package.json files

🎓 Learning Path by File

Day 1: Understanding

Read:

- START_HERE.md
- ARCHITECTURE.md
- QUICKSTART.md (Steps 1-2)

Day 2: Backend

Study:

- backend/Dockerfile
- backend/src/index.js
- backend/src/controllers/contactController.js

Run:

- QUICKSTART.md Step 3

Day 3: Frontend

Study:

- frontend/Dockerfile
- frontend/src/app/page.js
- frontend/src/components/ContactForm.js

Run:

- QUICKSTART.md Step 4

Day 4: Docker Compose

Study:

- docker-compose.yml
- nginx/nginx.conf

Run:

- QUICKSTART.md Step 5

Day 5: Jenkins

Study:

- jenkins/Jenkinsfile
- jenkins/scripts/

Run:

- QUICKSTART.md Step 6-7

🔍 Where to Find Things

Configuration

- Docker: [Dockerfile](#) in each service folder
- Compose: [docker-compose.yml](#) (root)
- Nginx: [nginx/nginx.conf](#)
- Next.js: [frontend/next.config.js](#)
- Jenkins: [jenkins/Jenkinsfile](#)

Application Code

- Portfolio UI: [frontend/src/app/page.js](#)
- Contact Form: [frontend/src/components/ContactForm.js](#)
- API Server: [backend/src/index.js](#)
- API Logic: [backend/src/controllers/contactController.js](#)
- Routes: [backend/src/routes/contact.js](#)

Data

- Contacts: [backend/src/data/contacts.json](#)

Documentation

- Overview: [START_HERE.md](#)
- Setup: [QUICKSTART.md](#)
- Architecture: [ARCHITECTURE.md](#)
- Learning: [LEARNING_ROADMAP.md](#)
- Reference: [README.md](#)

Scripts

- Build: [jenkins/scripts/build-*.bat](#)
- Deploy: [jenkins/scripts/deploy.bat](#)

💡 Pro Navigation Tips

1. **Bookmark START_HERE.md** - Your home base
2. **Keep QUICKSTART.md open** - Reference during setup
3. **Print ARCHITECTURE.md** - Visual reference
4. **Follow LEARNING_ROADMAP.md** - Structured learning
5. **Search README.md** - Quick command lookup

⌚ Your First 30 Minutes

```
Minute 0-5: Read START_HERE.md
Minute 5-10: Skim ARCHITECTURE.md
Minute 10-15: Open QUICKSTART.md
Minute 15-20: Run backend locally
Minute 20-25: Run frontend locally
Minute 25-30: Test contact form
```

🏆 Completion Checklist

Setup Phase

- Read START_HERE.md
- Completed QUICKSTART.md
- All services running
- Contact form working

Understanding Phase

- Read ARCHITECTURE.md
- Understand data flow
- Understand Docker setup
- Understand Jenkins pipeline

Learning Phase

- Started LEARNING_ROADMAP.md
- Completed Week 1
- Built custom features
- Deployed via Jenkins

Mastery Phase

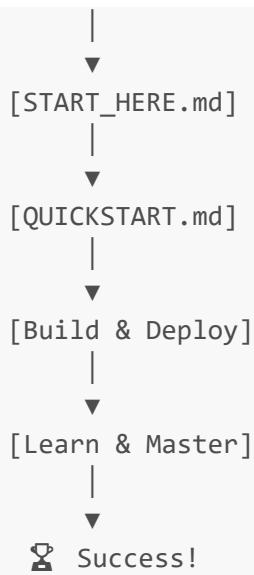
- Can explain architecture
- Can modify services
- Can debug issues
- Can teach others

🎉 You're All Set!

Current Location: PROJECT_MAP.md **Next Stop:** START_HERE.md **Final Destination:** DevOps Mastery



Your DevOps Journey



Ready? Open START_HERE.md and begin! ⚡