



Marp

# **AI-Powered Business Applications**

## **Building Beyond ChatGPT with FastAPI**

**Enhance Your Workflow with  
Custom AI Solutions**

# Course Overview

## What You'll Learn

- **Build AI chat interfaces** that go beyond ChatGPT
- **Organize conversations** with business context
- **Implement hybrid search** with vector databases
- **Deploy cost-effective** AI applications
- **Integrate business workflows** with AI

# The Problem with Generic AI

## Current Limitations

- **No business context** - Conversations exist in isolation
- **Poor organization** - Basic folder structures
- **Limited integration** - Can't connect to your data
- **Expensive** - High costs for business use
- **No customization** - One-size-fits-all approach

# Our Solution: FastOpp

## Open Source Learning Platform

- **Pre-built UI components** - Focus on AI, not frontend
- **Business context integration** - Clients, projects, workflows
- **Cost-effective deployment** - Under \$1/month hosting
- **Extensible architecture** - Build what you need
- **Real-world examples** - Marketing agency use case

# Course Structure

## 4 Learning Modules

1. **AI Chat UI** - Streaming responses, context management
2. **Conversation Organization** - Business-focused folder systems
3. **Vector Databases & Hybrid Search** - Semantic + keyword search
4. **Deployment & Scaling** - Production-ready applications

# Learning Path

## Assessment Flow

1. **Test features** on live site with learning objectives
2. **Review code** and documentation
3. **Watch video tutorials** (coming soon)
4. **Subscribe** for video notifications as we complete them

# Technology Stack

## What We Use

- **FastAPI** - Modern Python web framework
- **SQLModel** - Type-safe database models
- **SQLAdmin** - Auto-generated admin interface
- **Alpine.js** - Lightweight frontend framework
- **FAISS** - Vector database for semantic search
- **OpenAI** - LLM integration

# Business Use Cases

## Real-World Applications

- **Marketing Agencies** - Content creation workflows
- **Customer Support** - Knowledge base integration
- **Sales Teams** - Customer analysis and cross-selling
- **Research Teams** - Document search and analysis
- **Any Business** - Custom AI workflow enhancement



# Cost-Effective Deployment

## Hosting Options

- **Fly.io** - \$0-5/month for small apps
- **Railway** - Free tier available
- **Vercel** - Serverless deployment
- **Self-hosted** - Your own infrastructure

**Goal: Under \$1/month for light traffic**

# Why This Course?

## Learning Together

- **Open source** - All materials available
- **Community driven** - Learn from others
- **Practical focus** - Build real applications
- **Business value** - Solve actual problems
- **Fun approach** - Enjoy the learning process

# Prerequisites

## What You Need

- **Basic Python** knowledge
- **Understanding of APIs** (REST)
- **Familiarity with databases** (SQL)
- **Curiosity about AI** applications
- **Desire to build** something useful

# Getting Started

## Next Steps

1. **Explore the live site** - See what we're building
2. **Clone the repository** - Get your hands dirty
3. **Follow the guides** - Step-by-step learning
4. **Build your own** - Customize for your needs
5. **Share your work** - Help others learn

# Let's Begin!

## Ready to Build?

**The best way to learn is by building!**

Start with small enhancements and gradually add more sophisticated features.

**Let's create something amazing together! 🚀**