



# Building Production Ready - AI Agents

- PURVESH RATHOD

# Introduction

Hey, I'm **Purvesh Rathod**, currently working as a Founding Engineer at Gia AI.

**Gia AI** is a growth platform for fast-scaling service firms. We bring together everything a consulting firm needs to grow: find new business, create content and manage clients all in one place.

I love full-stack development, cloud architecture, and shipping products that actually make a difference.

# What We'll Cover Today?

- What the heck AI agents really are
- Why agents are blowing up right now
- Gia AI Architecture
- How CrewAI Framework fits into the ecosystem
- How Gia builds & ships agents to production
- Live hands-on (the fun part)

# The AI Evolution

We've seen three distinct waves in AI.

- **Traditional ML models:** think recommendation engines, fraud detection. They're great at one specific task, but that's all they do. You train a model to predict churn, it predicts churn.
- **LLMs:** GPT, Claude, Gemini – suddenly we had general-purpose intelligence.
  - You could ask it anything: write code, explain quantum physics, draft an email.
  - It is revolutionary, but still fundamentally reactive.
  - You ask, it answers. One interaction at a time.
- **Agent:** The key shift? From 'answer my question' to 'accomplish my goal.' An agent doesn't just tell you how to book a flight – it actually books the flight. It reasons, plans, uses tools, and takes action. That's a fundamentally different paradigm.

# What are AI Agents?

**LLMs:** Large Language Models are AI systems trained on massive datasets (trillions of tokens) to understand and generate human-like text. E.g. Claude, GPT, Gemini

- AI agents = LLMs that don't just chat... they do stuff
- They're systems that can:
  - **Think:** reason over goals & context
  - **Plan:** break work into steps
  - **Act:** use tools, APIs, data sources
  - **Adapt:** learn from outcomes or memory
  - **Collaborate:** work with other agents or humans
- Why agent matters?
  - Automation
  - Integration
  - Scale

"LLMs are the brain, but they need a body to act in the world. That body is the agent framework."

# Why AI Agents Matter?

- **Automation.** Complex workflows that previously needed a human in the loop can now run autonomously. Not just simple if-then automation, actual reasoning and decision-making.
- **Integration.** Agents can connect to your existing tools, databases, APIs, SaaS products. They become the glue between systems.
- **Scale.** Agents work 24/7. They don't get tired. They don't forget steps. Once you build a good agent, it handles tasks consistently.

# Frameworks for Building Agents

## CrewAI

- Multi-agent framework
- Agents with roles, goals, tools
- Easy orchestration
- Perfect for starters /simple & scalable
- Strong agent collaboration

## LangGraph

- Deterministic graphs
- Stateful agents
- Production-grade reliability
- Retries, breaks, edges, etc.

## Others

- Strands Agent by AWS
- AutoGPT
- Meta's OpenAgents
- etc.

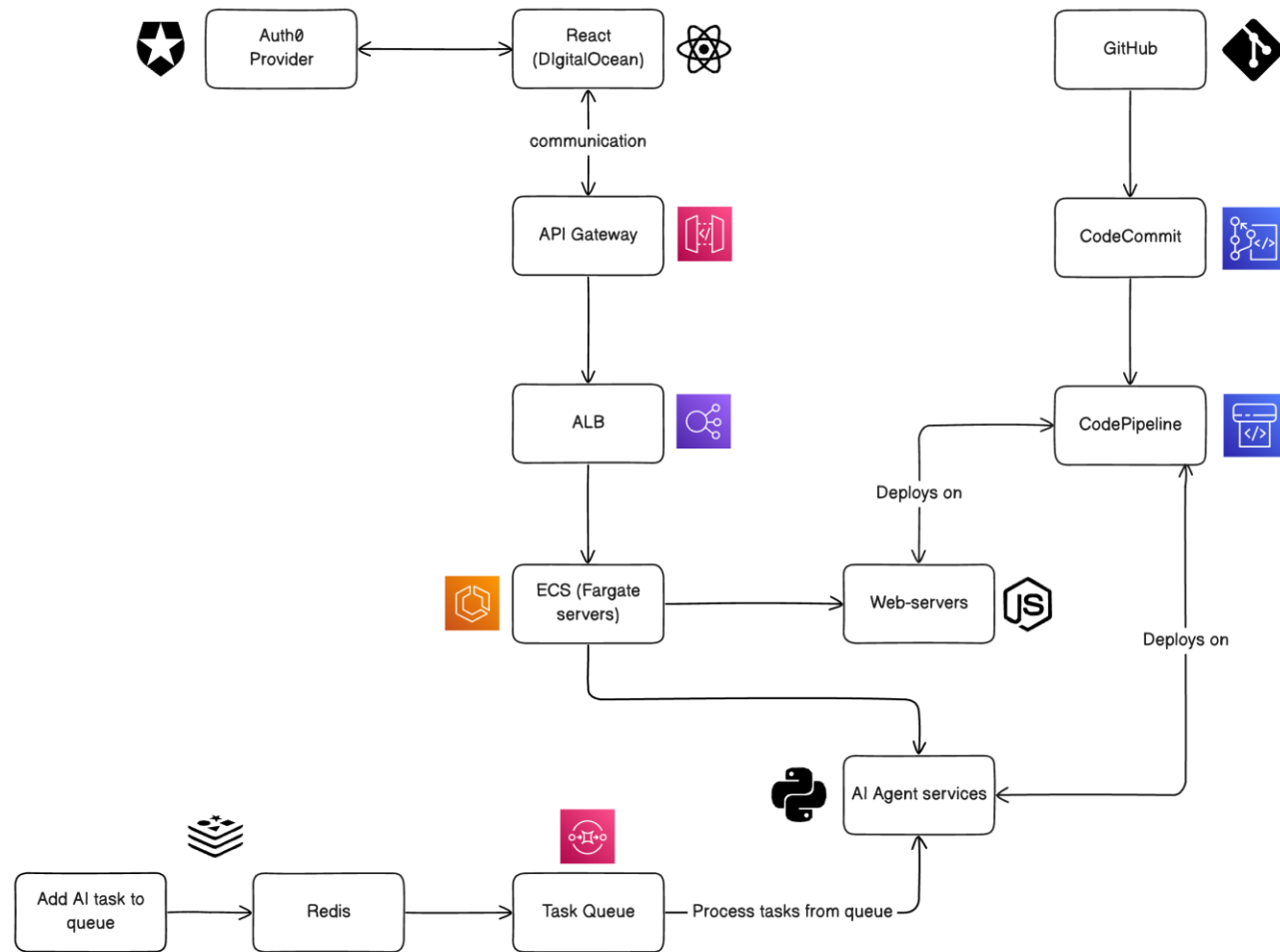


# Why CrewAI?

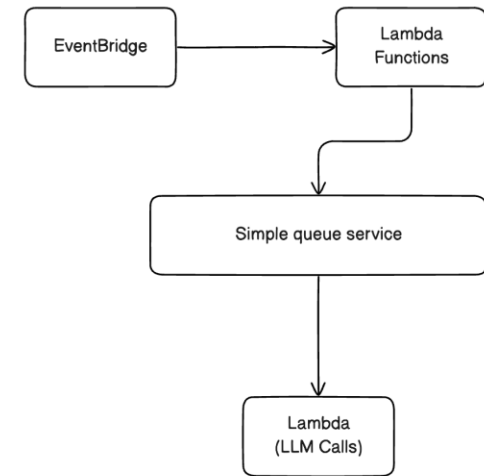
- **Role based design:**
  - You define agents with a role, a goal, and a backstory. It sounds almost silly, but it works incredibly well.
  - The backstory primes the LLM with the right context and expertise.
  - Think about it like hiring. You don't hire a 'general person.' You hire a 'Senior Market Researcher with 10 years of experience in SaaS.'
- **Collaboration built-in:**
  - Agents can delegate tasks to each other.
  - They share context automatically.
  - One agent's output becomes another agent's input.
  - You're not wiring this together manually.
- **Production-ready:**
  - Structured outputs with Pydantic models.
  - Built-in error handling.
  - Tool integrations.
  - It's not just a toy – you can actually ship this.



# Architecture @Gia



## Cron Job / Trigger Lambda





Now let's build something



Questions?

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Thank You!



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