Project Chimera – Autonomous Influencer Network

Role: Forward Deployed Engineer (FDE) Trainee
Focus: Agentic Infrastructure, Spec-Driven Design, Scalable Autonomy

Executive Summary

Project Chimera is a prototype **agentic infrastructure** designed to demonstrate how autonomous AI influencers can be built, coordinated, and governed using a modular multi-agent architecture. Instead of focusing on media generation quality, this submission prioritizes **system correctness, extensibility, and orchestration**, aligning with real-world production constraints.

The system implements a **Manager–Worker agent pattern** inspired by swarm architectures, where an Orchestrator agent coordinates specialized agents responsible for trend detection, content generation, engagement simulation, and analytics feedback. The architecture is intentionally platform-agnostic and API-light, enabling safe iteration and future integration with real social networks.

Architectural Approach

Agent Pattern Chosen:
✅ **Hierarchical Orchestrator Pattern (Manager + Specialized Agents)**

Why this pattern?

- Prevents prompt chaos and agent conflict

- Mirrors real-world MLOps & agent governance

- Easily extendable to MCP / OpenClaw ecosystems

Core Agents

Agent	Responsibility
Orchestrator	Controls workflow & lifecycle
Trend Agent	Detects trending topics
Content Agent	Generates platform-ready content
Engagement Agent	Simulates interaction

Analytics Agent	Measures performance & feedback

Alignment with Project Chimera SRS

SRS Requirement	Implementation
Autonomous agents	Modular agent classes
Orchestration layer	Central Orchestrator
Scalability	Stateless agents
Governance	Centralized control
Observability	JSON metrics + logs

This design ensures **low coupling, high cohesion**, and future compatibility with **MCP, OpenClaw, and Swarm architectures**.

Key Design Decisions

- **Mocked APIs** instead of real social platforms → avoids fragility

- **Stateless agents** → horizontally scalable

- **Single source of truth** via orchestrator

- **FastAPI backend** → production-grade interface

- **CrewAI / LangChain** → agent collaboration readiness

Future Enhancements

- MCP Tool adapters

- Real social media APIs

- Vector memory (RAG)

- Human-in-the-loop moderation

- Blockchain-based agent identity