

AI Crew Commander Suite - Master Project Plan

Project Overview






Primary Application: AI Crew Commander Suite (Lead by ASTRA) **Architecture:** Modular plugin-based system **Additional Programs:** 2 companion programs (shared module ecosystem)

Core Requirements

Main Application Features

1. **ASTRA Commander** - Primary AI orchestrator
2. **22 Specialized AI Agents** - Each with unique expertise
3. **Voice System** - ElevenLabs female voice with lip-sync
4. **Avatar System** - 4+ animated cyborg avatars with motion
5. **Animated Backgrounds** - Cyberpunk aesthetic with movement
6. **Autonomous Actions** - Can actually execute, not just advise

Color Scheme

- **Primary:** Blue ( #4EC5FF), Violet ( #AE71FF), Purple ( #9333EA)
- **Accents:** Silver ( #E2E8F0), Pink Glow ( #FF6B9D)
- **Theme:** Cyberpunk/Tech aesthetic

AI Agent Roster (22 Agents)

1. Alpha - Code (GPT-4o)
2. Beta - UX/UI (Claude Sonnet)
3. Gamma - Data Science (Gemini Pro)
4. Delta - Security (WatsonX)
5. Epsilon - DevOps (Bedrock Claude)
6. Zeta - Finance (GPT-4o)
7. Eta - Research (Perplexity)
8. Theta - Art (Claude Sonnet)
9. Iota - Video (GPT-4o)
10. Kappa - Web Development (LLaMA 3 70B)
11. Lambda - AI/ML (Mistral Large)
12. Mu - Database (WatsonX)
13. Nu - Testing (GPT-4o)
14. Xi - Documentation (Claude Sonnet)
15. Omicron - Product (Gemini Pro)
16. Pi - Marketing (Perplexity)
17. Rho - Science (Gemini Pro)
18. Sigma - Mathematics (WatsonX)
19. Tau - Corporate Law (Claude Sonnet)
20. Upsilon - IP Law (GPT-4o)
21. Phi - Web Automation (GPT-4o)
22. Omega - Self-Improvement (Claude Sonnet)

Knowledge Bases (12)

1. Programming
2. Web Tech
3. AI/ML
4. Security
5. Finance
6. Science
7. Mathematics
8. Legal (Corporate, IP, Compliance)
9. Business & Management
10. Design & UX
11. Marketing
12. Automation

Modular Architecture

Core System

- Main application shell
- Agent orchestration
- Voice/Avatar system
- Communication bus for modules

Pluggable Modules (Resource-Heavy)

1. **Terminal Module** - Command execution
2. **Video Editor Module** - Video editing tools
3. **Image Editor Module** - Image manipulation
4. **PDF Editor Module** - PDF viewing/editing
5. **Word Processor Module** - Document editing
6. **File Manager Module** - Project file management
7. **Browser Automation Module** - Web control
8. **Data Analytics Module** - Charts/analysis

Module Loading Strategy

- Lazy load on demand
- Unload when not in use
- Share modules across 3 programs
- Plugin API for extensibility

Technical Stack

Frontend

- React 18+
- Framer Motion (animations)
- Tailwind CSS
- Canvas API (backgrounds)
- Three.js (optional 3D)

Backend

- Python 3.10+
- FastAPI
- CrewAI framework
- WebSocket (real-time)

Voice & Media

- ElevenLabs API
- Browser