

# Shadow AI - Agent Overview

Version 13.0.0 | 480 Services | Enterprise-Ready

## 1. What is Shadow AI?

Shadow AI is an autonomous AI coding agent with **480 specialized services** that can:

- ✔ Generate code in any language
- ✔ Plan and execute complex tasks autonomously
- ✔ Self-debug and self-heal errors
- ✔ Integrate with OpenAI, Anthropic, Google, Ollama
- ✔ Manage entire software development lifecycle

**Tech Stack:** Electron + React + TypeScript + Node.js

## 2. Core Service Categories

Category	Count	Key Services
Code Generation	150+	FullStackGenerator, APIGenerator, ComponentGenerator
AI/ML	50+	NeuralNetworkDesigner, NLPPipeline, ComputerVision
DevOps	40+	KubernetesArchitect, TerraformDesigner, MonitoringStack
Security	30+	SecurityScanner, ThreatModeling, Encryption
Enterprise	40+	Authentication, PaymentIntegration, Analytics
Testing	25+	TestGenerator, E2EService, PerformanceProfiler

## 3. Key Capabilities

### Autonomous Agent Features

- GoalDecomposerService** - Break complex goals into tasks
- SelfReflectionService** - Evaluate and improve decisions
- ErrorRecoveryService** - Auto-detect and fix errors
- RecursiveSelfImprovementService** - Improve own code

### AI Model Support

- OpenAI (GPT-4, GPT-3.5)
- Anthropic (Claude 3)
- Google (Gemini Pro)
- Ollama (Local models)

## Code Generation

- 50+ languages supported
  - Full-stack applications
  - APIs (REST, GraphQL, gRPC)
  - Mobile apps (React Native, Flutter)
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## 4. Enterprise Features

Feature	Services
Authentication	JWT, OAuth, SSO, MFA
Payments	Stripe, PayPal, Crypto
Analytics	Event tracking, Funnels, Cohorts
Multi-tenancy	Tenant isolation, Feature flags
Search	Elasticsearch, Algolia, Vector search
Messaging	RabbitMQ, Kafka, SQS




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## 5. Development Opportunities

### High Priority

-  **UI/UX Enhancement** - Modern design needed
-  **Real-Time Collaboration** - Currently single-user
-  **Plugin System UI** - No visual marketplace

### Medium Priority

-  **Performance** - Bundle size optimization (691 KB)
-  **Offline Mode** - Enhanced local model support
-  **Testing Coverage** - More tests needed

### Key Files to Modify

- `src/main/services/` - All 480 services
  - `src/main/ipc/kimiK2Handlers.ts` - IPC handlers
  - `src/renderer/` - UI components
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