



DESTINY-GRAM

Constitutional Memory - BlackVault™

Tech Stack



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Technical Stack Specifications

1 Backend

- **Framework:** FastAPI (Python 3.11+)
- **Database:** PostgreSQL 15+ with PostGIS extensions
- **ORM:** SQLAlchemy 2.0
- **Caching:** Redis 7+
- **Task Queue:** Celery with Redis broker
- **API Documentation:** OpenAPI 3.1 (automatic via FastAPI)

2 Frontend

- **Framework:** React 18+ with TypeScript
- **State Management:** Redux Toolkit + React Query
- **UI Components:** Atomic design system with shadcn/ui
- **Styling:** Tailwind CSS
- **Data Visualization:** Recharts, D3.js
- **Real-time:** WebSocket connections for live updates

3 Infrastructure

- **Containerization:** Docker with multi-stage builds
- **Orchestration:** Kubernetes (Helm charts provided)
- **Cloud Platform:** Cloud-agnostic (AWS/GCP/Azure compatible)
- **CI/CD:** GitHub Actions with automated testing
- **Monitoring:** Prometheus + Grafana
- **Logging:** ELK Stack (Elasticsearch, Logstash, Kibana)
- **Error Tracking:** Sentry integration

4 AI/ML Components

- **Profile Analysis:** Claude API (Anthropic) for user personality/employee analysis
- **Pattern Recognition:** Custom ML models (scikit-learn, TensorFlow)
- **NLP Processing:** spaCy for conversation analysis
- **Sentiment Analysis:** Hugging Face Transformers
- **Recommendation Engine:** Collaborative filtering algorithms