HARMONIC API

Complete Documentation

v1.0.0

Generated: 2025-11-27T18:08:11.899Z

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1. OVERVIEW

Harmonic is a multi-layer reasoning API that combines:
• Trinity: 5-persona AI debate system
• Zürich: Deterministic logic engine
• Brain: 8TB knowledge memory
• ASI: Meta-layer fusion system

Base URLs:
• Frontend: http://localhost:3000
• API (Dev): http://localhost:5000
• Next.js API: http://localhost:3000/api

Total Endpoints: 34
Response Format: JSON

2. AUTHENTICATION

POST /api/v1/auth/signup
Create a new account

Body:
```
{
  "email": "user@example.com",
  "password": "secure_password",
  "username": "username"
}
```

Response:
```
{
  "ok": true,
  "userId": "user_id",
  "token": "jwt_token",
  "tier": "free"
}
```

POST /api/v1/auth/login
Login to existing account

GET /api/v1/user/me
Get current user info (requires auth)

3. CORE ENDPOINTS (v1)

POST /api/v1/zurich
Deterministic reasoning (Zürich cycle)
Body: { "prompt": "your question" }

POST /api/v1/debate
Multi-persona debate
Body: { "topic": "debate topic" }

POST /api/v1/asi-fusion
Combined Trinity + Zürich + Brain reasoning
Body: { "query": "your question" }

POST /api/v1/cycle/run
Full 8-stage Zürich reasoning cycle
Body: { "input": "topic", "config": {} }

GET /api/v1/info
API information & endpoint listing

4. DATA MANAGERS

POST /api/v1/data
Fetch from 5 data sources (Wiki, ArXiv, News, Weather, Curiosity)

Query Parameters:
- query: Search query (required)
- mode: "single" or "comprehensive"
- sources: ["wiki", "arxiv", "news", "weather", "curiosity"]

GET /api/v1/data?action=stats
Get data pipeline statistics

POST /api/v1/managers
Orchestrate persona managers (Alba, Albi, Jona, Blerina, ASI)

Actions:
- "alba-gather": Collect information
- "albi-store": Store in memory
- "jona-check": Security verification
- "blerina-generate": Generate documentation
- "asi-verify": Quality verification

5. TRANSLATION & LANGUAGE

POST /api/v1/translate
Translate text to 24 languages

Body: {
  "text": "Hello world",
  "targetLang": "sq",
  "sourceLang": "en"
}

POST /api/v1/detect-language
Auto-detect text language

Body: { "text": "Përshëndetje" }

GET /api/v1/languages
List all 24 supported languages

Supported Languages: English, Albanian, Greek, German, Spanish,
Turkish, Russian, Mandarin Chinese, Hindi, Arabic, Hebrew,
Italian, Bulgarian, Swedish, Norwegian, Dutch, French,
Portuguese, Japanese, Korean, Polish, Vietnamese, Thai, Indonesian

6. SCIENCE & KNOWLEDGE

GET /api/v1/science
Get science facts and curiosity database

Query Parameters:
- domain: "biology", "physics", "medicine", "ai", "environment"
- count: Number of facts (default: 5)

Response:
```
{
  "facts": ["fact 1", "fact 2", ...],
  "domain": "biology",
  "count": 5
}
```

GET /api/v1/dot?type=harmonic
Generate Graphviz DOT diagrams

Available types:
- "harmonic": System architecture
- "zurich": 9-stage reasoning cycle
- "trinity": 5-persona debate flow
- "brain": Memory indexer structure
- "reasoning": Full reasoning pipeline

7. USAGE & METRICS

GET /api/v1/usage
Get current API usage statistics

Response:
```
{
  "userId": "user_id",
  "tier": "free|pro|enterprise",
  "requests": 45,
  "limit": 1000,
  "resetDate": "2025-12-27T00:00:00Z"
}
```

GET /api/health
Basic health check

GET /api/v1/managers?action=health
Detailed manager health status

GET /api/v1/managers?action=metrics
Performance metrics for all personas

8. ERROR HANDLING

All errors return JSON with status codes:

400 Bad Request

```
{
  "ok": false,
  "error": "validation_error",
  "message": "Description"
}
```

401 Unauthorized

```
{
  "ok": false,
  "error": "auth_required",
  "message": "Invalid or missing API key"
}
```

429 Too Many Requests

```
{
  "ok": false,
  "error": "rate_limited",
  "resetIn": 3600
}
```

500 Internal Server Error

```
{
  "ok": false,
  "error": "server_error",
  "message": "Something went wrong"
}
```

9. QUICK EXAMPLES

Example 1: Ask Harmonic a question

```
curl -X POST http://localhost:3000/api/v1/asi-fusion \
  -H "Content-Type: application/json" \
  -d '{"query": "What is machine learning?"}'
```

Example 2: Translate text

```
curl -X POST http://localhost:3000/api/v1/translate \
  -H "Content-Type: application/json" \
  -d '{
    "text": "Hello",
    "targetLang": "sq"
  }'
```

Example 3: Get science facts

```
curl http://localhost:3000/api/v1/science?domain=biology
```

HARMONIC API REFERENCE

For more information:
• GitHub: https://github.com/LedjanAhmati/harmonic
• Website: http://localhost:3000
• API Base: http://localhost:3000/api

Support:
• Email: support@harmonic-ai.com
• Issues: GitHub Issues

Documentation Last Updated: 27.11.2025