MOUSSAIF AGI OS — 40 GENERAL MASTERCLASS HYPERLOOPS & 30 MISSING GAP SKILLS

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Storage Architecture: Zero-Duplication (Physical in ~/.hermes, Junctioned to K2-K5)

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1. EXECUTIVE MASTERCLASS OVERVIEW

This masterclass document catalogs the **40 General Masterclass Hyperloops (HL-51 to HL-90)** and **30 Missing Gap Skills (GAP-01 to GAP-30)** created to ensure human-expert results across all fields and tasks without slop, hallucination, or misconversion.

Zero-Duplication Guarantee:

All 30 skills reside in ~/.hermes/skills/ and all 40 hyperloops reside in ~/.hermes/hyperloops/. Because ~/.opencode, ~/.codex, ~/.claude, and ~/.gemini/antigravity use Windows NTFS Junctions pointing to ~/.hermes, every kernel has 100% immediate access with **0 bytes of duplicate disk storage**.

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2. CATALOG OF THE 30 MISSING GAP SKILLS (GAP-01 to GAP-30)

| Skill ID | Skill Identifier (name) | Title & Purpose | Constitutional Tier | Domain |

|:---|:---|:---|:---|:---|

| **GAP-01** | moussaif-gap-01-zero-slop-human-voice-enforcer | GAP-01 — Zero-Slop Execution | T0-T2 | Content & Communication |

| **GAP-02** | moussaif-gap-02-constitutional-t0-t4-gatekeeper | GAP-02 — Zero-Slop Execution | T0-T2 | Safety & Governance |

| **GAP-03** | moussaif-gap-03-evidence-7tier-grading-matrix | GAP-03 — Zero-Slop Execution | T0-T2 | Research & Epistemology |

| **GAP-04** | moussaif-gap-04-destruction-court-qa-judge | GAP-04 — Zero-Slop Execution | T0-T2 | Quality Assurance |

| **GAP-05** | moussaif-gap-05-root-cause-4phase-debugger | GAP-05 — Zero-Slop Execution | T0-T2 | Software Engineering |

| **GAP-06** | moussaif-gap-06-tdd-red-green-refactor-loop | GAP-06 — Zero-Slop Execution | T0-T2 | Software Engineering |

| **GAP-07** | moussaif-gap-07-token-economy-model-cascade | GAP-07 — Zero-Slop Execution | T0-T2 | Model Routing & Cost Optimization |

| **GAP-08** | moussaif-gap-08-memory-sqlite-consolidation | GAP-08 — Zero-Slop Execution | T0-T2 | Memory & Vault Operations |

| **GAP-09** | moussaif-gap-09-rag-citation-harvester | GAP-09 — Zero-Slop Execution | T0-T2 | Knowledge Harvesting |

| **GAP-10** | moussaif-gap-10-coolify-vps-zero-downtime | GAP-10 — Zero-Slop Execution | T0-T2 | DevOps & Cloud Infrastructure |

| **GAP-11** | moussaif-gap-11-security-injection-shield | GAP-11 — Zero-Slop Execution | T0-T2 | Cybersecurity |

| **GAP-12** | moussaif-gap-12-api-credential-vault-ops | GAP-12 — Zero-Slop Execution | T0-T2 | Security & DevOps |

| **GAP-13** | moussaif-gap-13-ui-token-design-system-md | GAP-13 — Zero-Slop Execution | T0-T2 | UI/UX & Design Systems |

| **GAP-14** | moussaif-gap-14-conversion-copywriting-aida | GAP-14 — Zero-Slop Execution | T0-T2 | Content & Marketing |

| **GAP-15** | moussaif-gap-15-seo-serp-intent-cartographer | GAP-15 — Zero-Slop Execution | T0-T2 | SEO & Growth |

| **GAP-16** | moussaif-gap-16-email-nurture-revenue-loop | GAP-16 — Zero-Slop Execution | T0-T2 | Email Marketing |

| **GAP-17** | moussaif-gap-17-linkedin-carousel-authority | GAP-17 — Zero-Slop Execution | T0-T2 | Social Media & Growth |

| **GAP-18** | moussaif-gap-18-ebook-kdp-gumroad-factory | GAP-18 — Zero-Slop Execution | T0-T2 | Digital Product Factory |

| **GAP-19** | moussaif-gap-19-image-prompt-recraft-flux | GAP-19 — Zero-Slop Execution | T0-T2 | Visual Art & Design |

| **GAP-20** | moussaif-gap-20-video-shotlist-broll-director | GAP-20 — Zero-Slop Execution | T0-T2 | Video Production |

| **GAP-21** | moussaif-gap-21-multilingual-market-localization | GAP-21 — Zero-Slop Execution | T0-T2 | Localization & Growth |

| **GAP-22** | moussaif-gap-22-whatsapp-concierge-automator | GAP-22 — Zero-Slop Execution | T0-T2 | Automation & Client Ops |

| **GAP-23** | moussaif-gap-23-crm-sales-ledger-normalizer | GAP-23 — Zero-Slop Execution | T0-T2 | Analytics & Commerce |

| **GAP-24** | moussaif-gap-24-quantitative-risk-var-modeler | GAP-24 — Zero-Slop Execution | T0-T2 | Finance & Quantitative Analysis |

| **GAP-25** | moussaif-gap-25-healthcare-fhir-interop | GAP-25 — Zero-Slop Execution | T0-T2 | Healthcare & Bio Informatics |

| **GAP-26** | moussaif-gap-26-legal-contract-risk-auditor | GAP-26 — Zero-Slop Execution | T0-T2 | Legal & Compliance |

| **GAP-27** | moussaif-gap-27-smart-contract-gas-auditor | GAP-27 — Zero-Slop Execution | T0-T2 | Web3 & Blockchain |

| **GAP-28** | moussaif-gap-28-patent-prior-art-cartographer | GAP-28 — Zero-Slop Execution | T0-T2 | Intellectual Property & R&D |

| **GAP-29** | moussaif-gap-29-dag-multi-agent-orchestrator | GAP-29 — Zero-Slop Execution | T0-T2 | Orchestration & Teaming |

| **GAP-30** | moussaif-gap-30-self-improvement-regression-gate | GAP-30 — Zero-Slop Execution | T0-T2 | Self-Evolution & AGI Kernel |

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3. CATALOG OF THE 40 GENERAL MASTERCLASS HYPERLOOPS (HL-51 to HL-90)

| ID | Filename | Masterclass Title | Primary Sub-Mind | Tier |

|:---|:---|:---|:---|:---|

| **HL-51** | HL-51-general-software-engineering-masterclass.md | General Full-Stack Software Engineering Masterclass | SM-07 (07-code-forge) | T1-T2 |

| **HL-52** | HL-52-general-algorithm-optimization-masterclass.md | Algorithm Design & Computational Optimization Masterclass | SM-07 (07-code-forge) | T1-T2 |

| **HL-53** | HL-53-general-systematic-debugging-masterclass.md | Systematic Root-Cause Debugging & Regression Elimination | SM-07 (07-code-forge) | T1-T2 |

| **HL-54** | HL-54-general-devops-cicd-cloud-masterclass.md | DevOps, CI/CD, Containerization & Cloud Infrastructure | SM-09 (08-deploy-captain) | T2-T3 |

| **HL-55** | HL-55-general-cybersecurity-audit-masterclass.md | Cybersecurity Audit, Penetration Testing & Vulnerability Assessment | SM-02 (12-compliance-sentinel) | T0-T2 |

| **HL-56** | HL-56-general-machine-learning-engineering-masterclass.md | Machine Learning Model Engineering, Fine-Tuning & Evaluation | SM-06 (17-evolution-scientist) | T1-T2 |

| **HL-57** | HL-57-general-data-science-analytics-masterclass.md | Data Science, Statistical Inference & Predictive Analytics | SM-14 (11-data-analyst) | T0-T1 |

| **HL-58** | HL-58-general-quantitative-finance-masterclass.md | Quantitative Finance, Algorithmic Trading & Risk Modeling | SM-14 (11-data-analyst) | T0-T1 |

| **HL-59** | HL-59-general-academic-research-paper-masterclass.md | Academic Research, Prior-Art Discovery & Paper Drafting | SM-05 (01-knowledge-scout) | T0-T1 |

| **HL-60** | HL-60-general-legal-contract-compliance-masterclass.md | Legal Contract Drafting, Regulatory Compliance & Risk Auditing | SM-02 (12-compliance-sentinel) | T0-T1 |

| **HL-61** | HL-61-general-healthcare-fhir-interop-masterclass.md | Healthcare Data Interoperability & Medical Informatics | SM-05 (01-knowledge-scout) | T0-T1 |

| **HL-62** | HL-62-general-supply-chain-logistics-masterclass.md | Supply Chain Optimization, Logistics & Operations Research | SM-13 (09-outreach-hunter) | T0-T1 |

| **HL-63** | HL-63-general-executive-business-strategy-masterclass.md | Executive Business Strategy, Market Sizing & Competitive Auditing | SM-01 (04-router) | T0-T1 |

| **HL-64** | HL-64-general-conversion-copywriting-masterclass.md | Direct-Response Copywriting, Sales Page Architecture & Offer Design | SM-10 (06-content-engine) | T1-T2 |

| **HL-65** | HL-65-general-seo-serp-dominance-masterclass.md | SEO Authority Building, Keyword Intent Mapping & SERP Dominance | SM-12 (19-website-engineer) | T1-T2 |

| **HL-66** | HL-66-general-email-revenue-sequence-masterclass.md | Email Marketing Funnels, Nurture Sequences & High-CTR Deliverability | SM-13 (09-outreach-hunter) | T1-T2 |

| **HL-67** | HL-67-general-social-media-authority-masterclass.md | Social Media Growth, LinkedIn Authority & Viral Hook Generation | SM-10 (06-content-engine) | T1-T2 |

| **HL-68** | HL-68-general-digital-product-factory-masterclass.md | Digital Product Manufacturing (Ebooks, Templates, Prompt Packs) | SM-10 (06-content-engine) | T1-T2 |

| **HL-69** | HL-69-general-visual-brand-direction-masterclass.md | Visual Brand Direction, UI Token Specification & Design Systems | SM-11 (13-creative-director) | T1-T2 |

| **HL-70** | HL-70-general-image-prompt-art-direction-masterclass.md | Image Generation Briefing, RECRAFT/FLUX Art Direction & QA | SM-11 (13-creative-director) | T1-T2 |

| **HL-71** | HL-71-general-video-production-shotlist-masterclass.md | Video Production, Shot-List Architecture & Animated Storytelling | SM-11 (13-creative-director) | T1-T2 |

| **HL-72** | HL-72-general-audio-tts-voice-engineering-masterclass.md | Audio Engineering, Speech-to-Text & Voice TTS Scripting | SM-11 (13-creative-director) | T1-T2 |

| **HL-73** | HL-73-general-multilingual-localization-masterclass.md | Multilingual Translation, Cultural Localization & Regional Tone | SM-10 (06-content-engine) | T1-T2 |

| **HL-74** | HL-74-general-crm-automation-concierge-masterclass.md | CRM Workflow Automation, Client Concierge & Lead Nurturing | SM-15 (14-automation-weaver) | T1-T2 |

| **HL-75** | HL-75-general-whatsapp-ai-concierge-masterclass.md | WhatsApp Conversational AI Concierge & Ticket Resolution | SM-15 (14-automation-weaver) | T1-T2 |

| **HL-76** | HL-76-general-autonomous-browser-ops-masterclass.md | Autonomous Web Browsing, DOM Inspection & E-Commerce Workflow | SM-12 (19-website-engineer) | T1-T2 |

| **HL-77** | HL-77-general-api-integration-security-masterclass.md | API Integration, Credential Security & Webhook Handling | SM-02 (12-compliance-sentinel) | T1-T2 |

| **HL-78** | HL-78-general-database-schema-indexing-masterclass.md | Database Schema Design, Migration & Performance Indexing | SM-07 (07-code-forge) | T1-T2 |

| **HL-79** | HL-79-general-microservices-resilience-masterclass.md | Microservices Decomposition & Distributed System Resilience | SM-07 (07-code-forge) | T1-T2 |

| **HL-80** | HL-80-general-smart-contract-security-masterclass.md | Smart Contract Security Auditing & Gas Optimization | SM-02 (12-compliance-sentinel) | T1-T2 |

| **HL-81** | HL-81-general-defi-protocol-yield-audit-masterclass.md | DeFi Protocol Yield, Economic Sustainability & Composability Audit | SM-14 (11-data-analyst) | T0-T1 |

| **HL-82** | HL-82-general-patent-prior-art-analysis-masterclass.md | Patent Prior-Art Analysis, Novelty Verification & Inventive Step | SM-05 (01-knowledge-scout) | T0-T1 |

| **HL-83** | HL-83-general-government-rfp-proposal-masterclass.md | Government RFP/Tender Technical Proposal Drafting & Compliance | SM-13 (09-outreach-hunter) | T1-T2 |

| **HL-84** | HL-84-general-real-estate-roi-valuation-masterclass.md | Real Estate Financial Valuation, Cap-Rate & ROI Modeling | SM-14 (11-data-analyst) | T0-T1 |

| **HL-85** | HL-85-general-agriculture-yield-prediction-masterclass.md | Agriculture Yield Prediction & Environmental Sensor Analytics | SM-14 (11-data-analyst) | T0-T1 |

| **HL-86** | HL-86-general-customer-support-refund-masterclass.md | Automated Customer Support Loop & Refund Risk Mitigation | SM-15 (14-automation-weaver) | T1-T2 |

| **HL-87** | HL-87-general-crisis-recovery-rollback-masterclass.md | Crisis Management, Rollback Orchestration & Incident Response | SM-09 (08-deploy-captain) | T2-T3 |

| **HL-88** | HL-88-general-meta-learning-evolution-masterclass.md | Meta-Learning, Self-Evolution & Skill Regression Testing | SM-06 (17-evolution-scientist) | T0-T1 |

| **HL-89** | HL-89-general-memory-rag-consolidation-masterclass.md | Memory Consolidation, RAG Vector Indexing & Knowledge Curation | SM-04 (15-memory-keeper) | T0-T1 |

| **HL-90** | HL-90-general-multi-agent-orchestration-masterclass.md | Multi-Agent Orchestration, DAG Dependency & Fleet Concurrency | SM-03 (20-orchestration-conductor) | T0-T2 |

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4. VERIFIED STORAGE & SYNCHRONIZATION POINTERS

1. **K1-Hermes**: C:\Users\mouss\.hermes\kb\MOUSSAIF_40_HYPERLOOPS_AND_30_GAP_SKILLS_REGISTRY.json *(Canonical Source)*
2. **K2-OpenCode**: C:\Users\mouss\.opencode\kb\MOUSSAIF_40_HYPERLOOPS_AND_30_GAP_SKILLS_REGISTRY.json *(Junction Link — 0 bytes)*
3. **K3-Codex**: C:\Users\mouss\.codex\kb\MOUSSAIF_40_HYPERLOOPS_AND_30_GAP_SKILLS_REGISTRY.json *(Junction Link — 0 bytes)*
4. **K4-Claude**: C:\Users\mouss\.claude\kb\MOUSSAIF_40_HYPERLOOPS_AND_30_GAP_SKILLS_REGISTRY.json *(Junction Link — 0 bytes)*
5. **K5-Antigravity**: C:\Users\mouss\.gemini\antigravity\kb\MOUSSAIF_40_HYPERLOOPS_AND_30_GAP_SKILLS_REGISTRY.json *(Junction Link — 0 bytes)*

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