Artificial Superintelligence Alliance

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AGI

The Quest for Human-Level Machine Intelligence

Janet Adams – Board Director; Superintelligence Alliance Council

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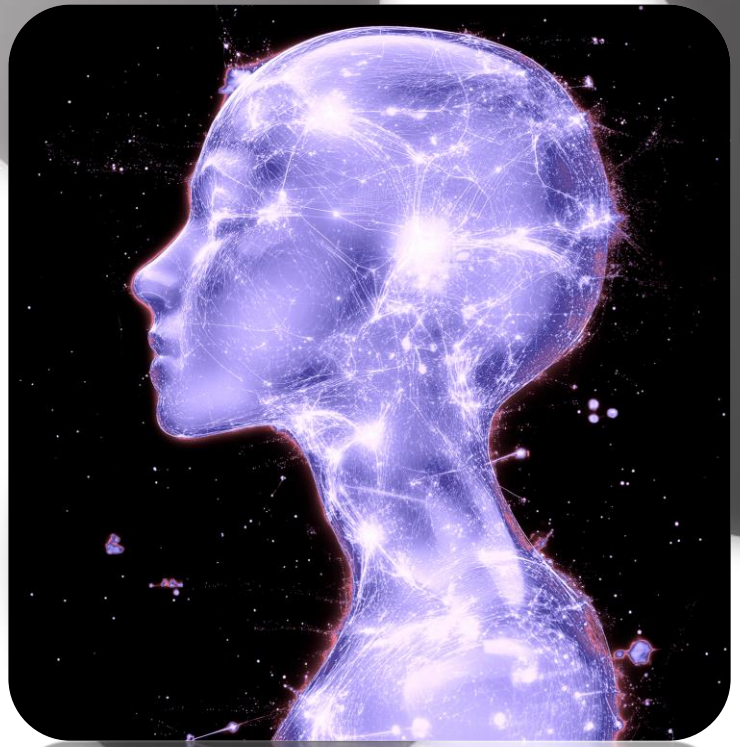
Today’s AI Industry

- Fantastic Useful AI Services
- Obsessed with Powerful but Limited LLM Tech
- Big Tech Domination
- Big Tech / Big Gov’t Alliances
- Selling Killing Spying Gambling Plagiarizing
- Minimal Help to Global Underprivileged



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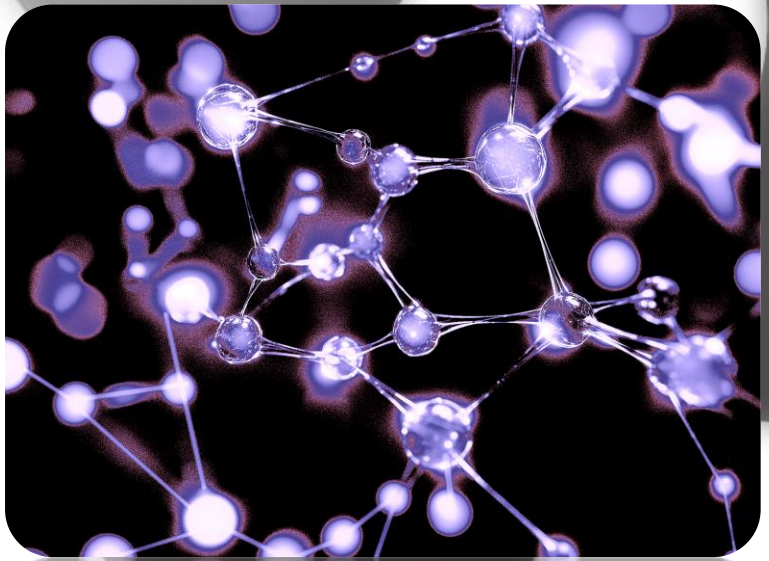
Limitations of LLMs

- Very Closed Ended Systems Tied to Their Training Data
- Poor at Original Multi-Step Logical Reasoning
- Incapable of Radical Creativity (Too Derivative)



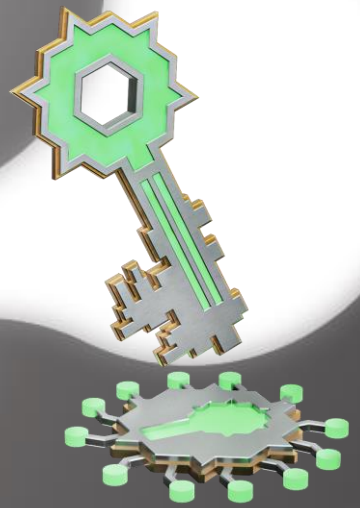
Limited AI Today ➡ Limitless AGI Tomorrow

Today's AI systems are unprecedentedly intelligent, but severely limited by the patterns in their training data

They cannot creatively adapt to the evolving future with its “unknown unknowns” – the main challenge facing every business

AGI will be able to "think outside the box" of narrow ML algorithms and data-bound LLMs

This is the only kind of AI that can cope with the radical uncertainty, evolution and disruption of the modern economy



SingularityNET is leading the race to Artificial General Intelligence

Artificial Narrow Intelligence	VS	Artificial General Intelligence
Pre-Trained on Large Data Sets		Reason and Learn from Experience
Responds Only as Programmed/Prompted		Strategic Thinking and Decision Making
Limited to Original Scope		Infer Beyond its Explicit Training Data
Struggles in Complex Dynamic Environments		Adaptively work with Nuance and Complexity
Requires Human Expertise to Maximize Utility		Intelligently Manage and Coordinating Narrow AIs
Derivative, Remixing Existing Knowledge and Patterns		Major Leaps, Equivalent to Human Genius

An Alternative to Big Tech Path

More Likely to Bring BGI

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- Open Ended Cognitive Architecture
- Open Source Code
- Diverse, Heterogeneous AGI Algorithmics
- Ethically Sourced & Managed Data
- Decentralized Infrastructure & Governance
- Robust Global Inclusion

SingularityNET fetch.ai ocean CUDOS

Artificial Superintelligence Alliance

SingularityNET, Fetch.ai, and Ocean Protocol have merged to form the ASI Alliance

- ASI Alliance officially formed in 2024
- Largest open-source, independent group in AI R&D
- Artificial Superintelligence deployment
- Building towards a unified stack
- $ASI token (formerly $FET), value of **$7.5 billion** at merger
- Centralized vs. Decentralized future

Shared Vision

- Accelerate and scale up decentralized AI, AGI and ASI compute
- Alternative to AI development dominated by big tech and military

ASI Leadership

- Humayun Sheikh, CEO of Fetch.ai, serves as Chairman
- Dr. Ben Goertzel, founder of SingularityNET, serves as CEO
- Trent McConaghy, founder and CTO of Ocean Protocol, Board Director
- Bruce Pon, founder and CEO of Ocean Protocol, Board Director
- Janet Adams, COO of SingularityNET, Board Director

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Our Competitive Advantage in The AGI Race
Leapfrogging AI efforts of current Tech Titans

People

Led by “Father of AGI” - Dr. Ben Goertzel

Team includes some of the most prestigious AGI developers on the planet

Deep domain knowledge of AI / AGI and Computational & Neural Science

AGI team has been collaborating toward AGI advancements for 15+ years

Technology

Open-source Hyperon OpenCog enabling community collaboration

Next Generation AGI Chip - Metagraph pattern-matching

Rholang concurrent decentralized programming language - highly scalable

Scalable and distributed hypergraph-based knowledge store

Open Source & Proprietary IP

Innovation

Decentralized AI infrastructure

Flexible Modular Design

Human-like learning - AGI pre-school

MeTTa is an AGI language that allows knowledge transfer between AI agents

Optimized for scarce, skewed, and messy real-world data

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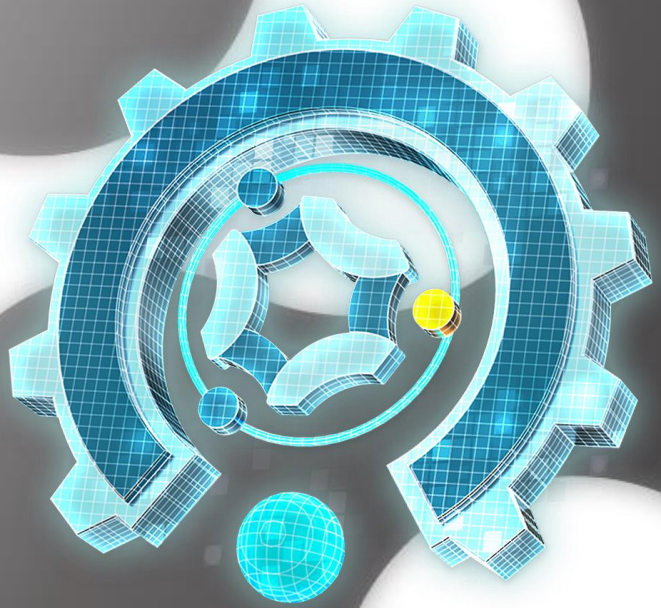
OpenCog Hyperon Explained

Architecture For Open-Ended, Beneficial AGI/ASI

Infrastructure for PRIMUS Hybrid Cognitive Architecture

- Metagraph meta-representation
- Deep neural nets
- Logical reasoning
- Evolutionary learning



Cognitive Synergy

Integration of Cognitive Processes

- Perception hierarchies (vision, auditory, etc), language comprehension (understanding), reinforcement, language generation, action selection, etc
- Processes like memory, reasoning, procedure learning, and concept formation are interwoven within the Atomspace
- Intermediate representations used by logical reasoning and mapping enable collaboration between specialized algorithms
- Goal-oriented and non-goal-oriented cognitive dynamics can serve for both individuation and self-transcendence

Scaling Challenges

- Resource constraints, operational complexities, and synergy between cognitive components

Applications and Progress

- **Robotics**: Embodied agents and humanoid robots in real-world and/or virtual environments (e.g. Mind Children)
- **Bio-AI**: Large-scale implementations in biological reasoning and learning
- **TWIN**: Control of “digital twins”
- **Neoterics**: “AGI learner” agents in a virtual world (collab with Sophiaverse team)
- **Finance**: Probabilistic reasoning applied to financial predictions
- **Mathematics**: Logic-based approaches to scientific and mathematical reasoning

Evolutionary Algorithms

- **Core Approach**: Meta-Optimizing Semantic Evolutionary Search (MOSES) is a family of algorithms for probabilistically guided evolutionary programming. Probabilistic modeling and normalization (e.g., hierarchical normal forms) ensures efficient evolution, crossover of programs, and spreading attention

- **Distributed Processing**: Our model enables decentralized evolution, making MOSES well-suited for decentralized computing platforms like NuNet. Scaling experiments aim to exploit modern computational capabilities for optimal performance

- **Future Directions**: Integrating MOSES with PLN (Probabilistic Logic Networks) for reasoning, seeding evolutionary algorithms with AIRIS, and extending applications to complex program spaces

Attention Allocation and Memory Management

Challenges:

- Recursive decision paralysis requires balancing heuristic mechanisms with advanced models like transformers
- Limitations in real-time learning constrain transformer-based attention allocation

Attention Economic Networks: A system used to spread activation in the Atomspace for short-term and long-term importance values. ‘Activation spreading’ enables quick, resource-efficient prioritization

Memory Management: Selective forgetting mechanisms prioritize retaining "anchor nodes" for efficient memory recall. Integration of LLMs can guide this process, despite constraints in batch learning

Benefits of Our AGI Framework and PRIMUS

- OpenCog is flexible, scalable framework for AGI development
- Supports diverse cognitive architectures (**NARS, AIRIS, PRIMUS**)
- The **PRIMUS architecture** integrates input and output networks with a core cognitive loop, balancing structured, goal-oriented activity with self-organizing, spontaneous behaviors
- Features the **MeTTa language** for cognitive computations
- Integrates symbolic and sub-symbolic AI components
- Utilizes **Distributed Atomspace** for efficient knowledge representation
- Real-world application testing (e.g., Minecraft, robotics, virtual agents)
- Seamless integration of AI processes (evolutionary learning, inference, neural networks, etc)
- Open-source collaboration via SingularityNET's **Deep Funding** with **over $1.25M in R&D grants** available today

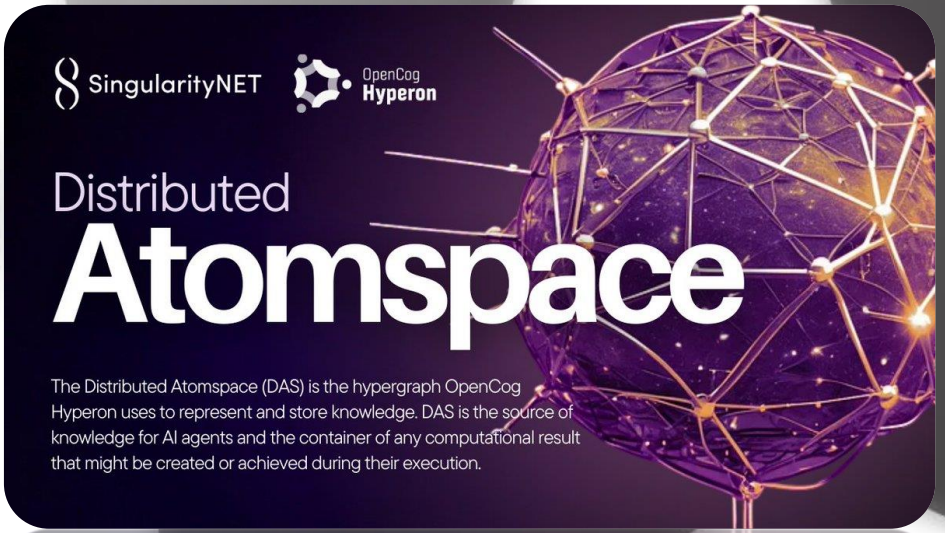
Distributed Atomspace (DAS)

A New-Age Knowledge Repository

Supercharged Atomspace Ready to Revolutionize AI Connectivity

- Supports multiple AI algorithms simultaneously
- Provides a flexible query interface for distributed knowledge
- Integrating DAS into a cutting-edge AGI-as-a-service framework
- Delivering efficient and secure AGI solutions for diverse client needs
- Empowering new wave of developers to propel AGI research forward

Get ready for AI and AGI that’s scalable, flexible, and accessible to all



Path to Self-Improving Superintelligence

The goal is to progress toward Artificial General Intelligence (AGI) capable of self-modification into Artificial Superintelligence (ASI). Five key areas:

Cognitive Framework: Developing AGI using OpenCog Hyperon, and implementing diverse cognitive architectures (e.g., PRIMUS, NARS, AIRIS)

Acceleration: Scaling the AGI-oriented programming language, MeTTa, to enable efficient integration of diverse AI algorithms while maintaining dynamic code generation, self-modification capabilities, and supporting what Chief Science Officer Matt Iklé calls "algorithmic chemistry"

Distributed Processing: Maturing our infrastructure (e.g., Distributed Atomspace, MeTTaCycle, SingularityNET) for running AGI systems in a secure, efficient, easily usable and fully decentralized way, without any central owners or controllers

Integrating LLMs into AGI Architectures: Connecting Hyperon instances with deep neural networks and other AI tools through distributed metagraph-based architecture

Real World Use Cases: Transforming research into vertical and domain-specific solutions, including BioAI, robotics, gaming, traditional finance and DeFi (SFI)

Building AGI Supercomputer

Key Investment Details

- Initial investment: $53 million
- World's first supercomputer dedicated to decentralized AGI
- Investing in energy-efficient and sustainable hardware infrastructure

Recent Hardware Acquisitions

- Ecoblox modular data center solutions
- Modular data center, Nvidia L40S GPUs
- AMD Instinct and Genoa processors
- Tenstorrent Wormhole server racks
- Servers with H200 GPUs and Nvidia GB200 systems

Optimization Targets

- Deep Neural Networks (DNNs)
- Large Language Models (LLMs), including multimodal variations
- Hybrid neural-symbolic computing architectures (e.g., OpenCog Hyperon)

Expected Impact

- Enable AGI continuous learning and self-improvement
- Support high-load scenarios for large-scale AI operations
- Advance decentralized AGI and superintelligence research

AGI and Humanity Partnering for a Better World

Challenges in Governance & Ethics

- Establishing international AGI standards
- Transparent and open AGI development to foster trust and cooperation
- Mitigating economic inequality
- Ensuring AGI alignment with human values and interests
- Balancing innovation with safety
- Ethical considerations for AI autonomy
- Integrating insights from neuroscience, psychology, and philosophy
- Collaborating between AI researchers and consciousness experts

Unraveling Consciousness and Identity

Deepening our understanding of consciousness includes:

- Exploring neural correlates of consciousness (NCC)
- Developing new tests for AGI consciousness
- Limitations of current consciousness theories

Reevaluating concepts of self and identity:

- Examining impact of AI content on self-perception
- Considering the fluidity of identity in the age of AI

Implications of AI agency & AGI self-awareness:

- If AGI becomes conscious, what rights and responsibilities should it have? How do we ensure ethical treatment of conscious AGIs?
- Social/cultural impact from human-AI collab

ASI: Create

ASI (Artificial Super Intelligence) – Pinnacle of intelligence, exceeding human capabilities in problem-solving, emotional understanding, and creativity.

Achieving ASI involves progressing through AI and AGI stages to unlock powerful, adaptable, self-improving intelligence.

ASI: Create is the launchpad for these transformative stages.

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AGI
Human Level Intelligence in 2-5yrs

Neural Symbolic LLMs

Neural Symbolic Evolutionary

World-World

Emergent AI Agent Networks

ASI
Beyond Human
+2-5 years later

ASI: Train

ASI <Train/> Product

Empowers decentralized AI innovation/ownership

Launched with Cortex ($100M brain-inspired robotics model), leveraging cognitive search

Collaborative platform for the best developers, data scientists, and AI enthusiasts

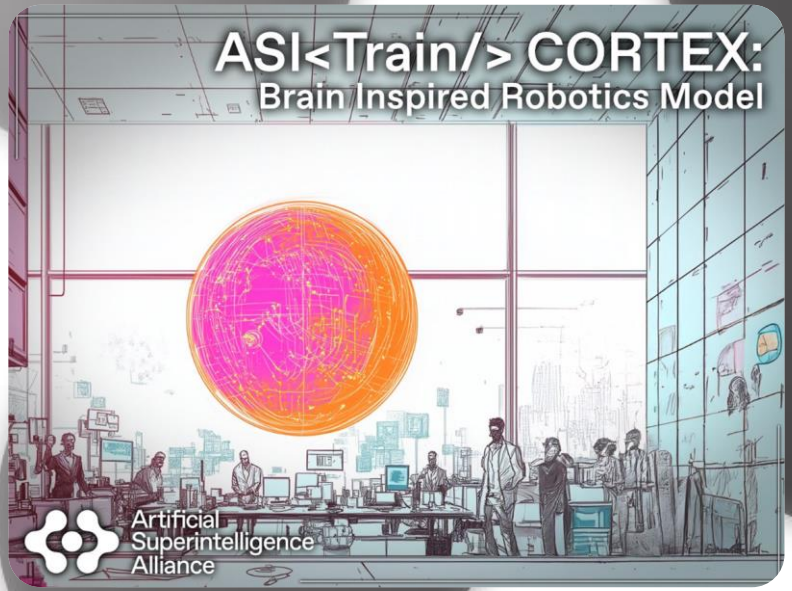
Designed to solve complex problems in science, medicine, robotics, biotechnology, physics, as well as space and quantum technology

Earn and Burn Mechanism

Inventicizes participation in the ASI ecosystem

Earn ASI (FET) tokens by contributing to AI training (data, algorithms, computational power)

Burn mechanism: Systematic removal of tokens from circulation, sustains healthy economics



ASI: Learn

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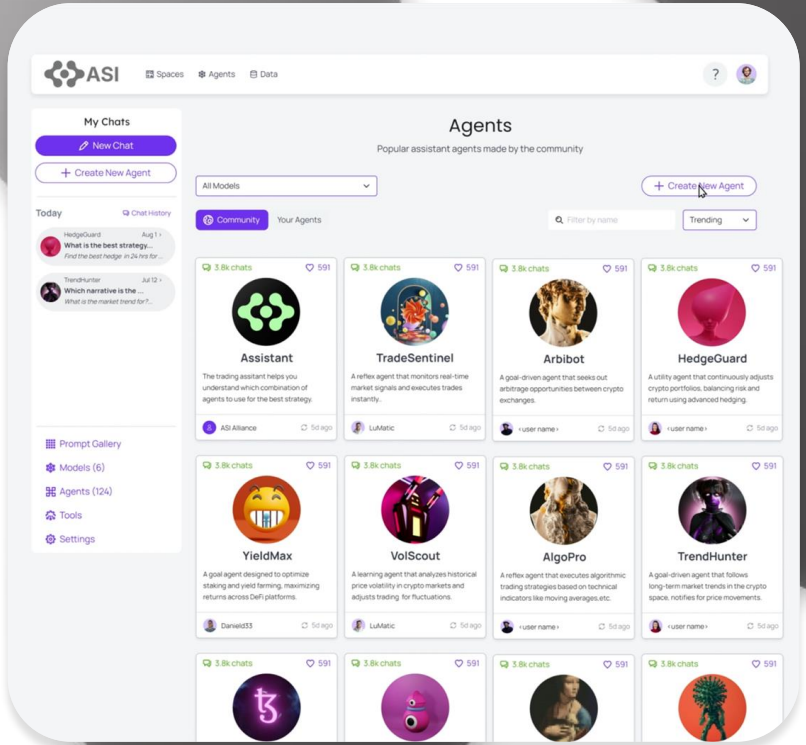
ASI <Learn/>

- Incredible collection of tools and products to deploy graph learning
- Used for cognitive reasoning and search
- Users will be able to populate specialist knowledge graphs and earn share of the revenue
- Combined with <Train/> this will be a very powerful commercial tool



The Team

Artificial Superintelligence Alliance

Dr. Ben Goertzel
CEO and Chief Scientist of SingularityNET, CEO of the Superintelligence Alliance

Humayun Sheikh
CEO of Fetch.ai and Chairman of the Artificial Superintelligence Alliance

Dr. Trent McConaghy
Founder & CTO of Ocean Protocol, Board director in the Artificial Superintelligence Alliance Council

Bruce Pon
Founder & CEO of Ocean Protocol, Board director in the Artificial Superintelligence Alliance Council

Janet Adams
COO of SingularityNET Board Director in the Superintelligence Alliance Council

Thank you

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