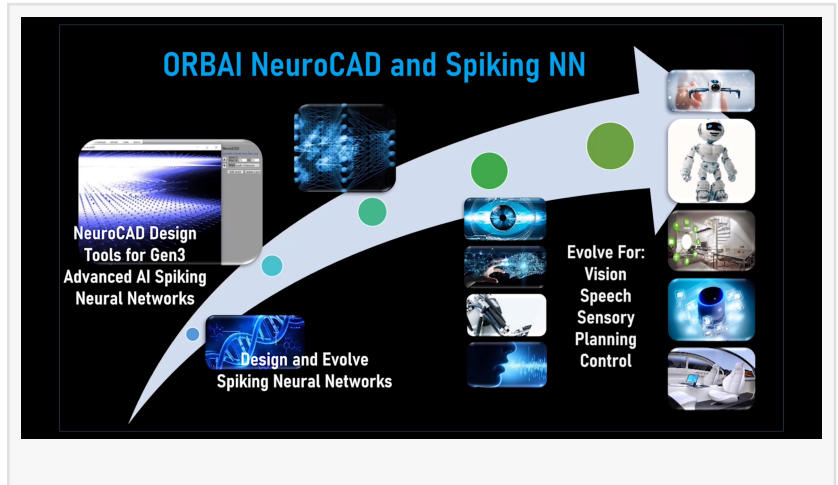


ORBAI Announces NeuroCAD v5.0 for Spiking Neural Network AI Development

SANTA CLARA, CA, USA, April 13, 2022 /EINPresswire.com/ -- ORBAI is announcing development on NeuroCAD V5.0, implementing a better UI and new features from the current [NeuroCAD v4.1](#) version.

NeuroCAD is a patented software tool with a UI for designing Spiking Neural Networks that forms the foundation for ORBAI's AGI technology. It allows the user to lay out the layers of spiking neurons, connect them up algorithmically, crossbreed and mutate them to generate a population of similar neural nets, then run simulations on them, train them, and then crossbreed the top performing designs and continue the genetic algorithms till a design emerges that meets the performance criteria set by the designer.



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Spiking Neural Networks are the Generation 3 of Artificial Intelligence that will leap over Generation 2 Deep Learning as the AI technology of choice this decade, enabled by the NeuroCAD toolchain.”

Brent Oster - CEO ORBAI

After the recent success of our [BICHNN SNN Autoencoder](#), and getting feedback from Alpha customers, we learned a lot about what was needed in the toolchain to achieve commercial viability - some additional features and improving ease of use. So, we branched the code base last week and began work on NeuroCAD v5.0 this week.

This will allow our customers to integrate the tools into their current R&D workflow much more easily, and build the functionality the need in their products. We know that

the technology works, but its ease of use and needing some additional features are the only things holding back more widespread adoption of NeuroCAD. Once we have the new and improved version of NeuroCAD v5.0 in customers hands, good feedback, and income from them, we can much more easily take the next steps as a company. Look to fall 2022 as a release date.

We will be keeping the core cross-platform Qt GUI and the high performance CUDA Spiking Neural Net simulation, and adding:

- Greatly streamlined workflow
- Optimizations to CUDA Simulation
- Enhanced OpenGL Rendering with better visualization
- More powerful, more flexible neural network models with better performance
- More connection map types
- Connections to more distant layers
- Inhibitory connections
- Izhikevich Neuron model fully implemented (in addition to Leaky Integrate and Fire)
- Leaky Integrate and Fire synapse model with Hebbian learning
- Better modelling of time-dependent spike transmission
- Visualization highlighting activity in specific network subsections
- Full integration of Genetic Algorithm runs (currently launched separately) and run-time diagnostics



By building on this NeuroCAD toolchain and SNN technology, ORBAI is developing [Artificial General Intelligence](#) that will enable more advanced AI applications, with conversational speech, human-like cognition, and planning and interaction with the real world, learning without supervision. It will find first use in smart devices, homes, and robotics, then in online professional services with an AGI at the core powering them.

What we usually think of as Artificial Intelligence (AI) today, when we see human-like robots and holograms in our fiction, talking and acting like real people and having human-level or even superhuman intelligence and capabilities, is actually called Artificial General Intelligence (AGI), and it does NOT exist anywhere on earth yet. What we actually have for AI today is much simpler and much more narrow Deep Learning (DL) that can only do some very specific tasks better than people and has fundamental limitations that will not allow it to become AGI

The NeuroCAD SNN technology that ORBAI is developing and patenting can dynamically encode any reality it perceives into fundamental building blocks or basis sets (and basis coordinates) that it can use to understand and manipulate that reality with the native mathematical language of linear algebra and computers, then reconstruct its results from the building blocks back to reality, giving computer-based AI the ability to work with real-world general inputs and artificial general intelligence operations on them.

With these developments, ORBAI will take the first steps towards AGI that can perceive the real world, reduce those perceptions to an internal format that computers can understand, yet still plan, think and dream like a human, then convert the results back to human understandable form, and even converse fluently using human language, enabling online professional services in finance, medicine, law, and other areas. It can also add these enhanced analytics, forecasting, and decision making capabilities to financial forecasting and enterprise software - where it can be used by businesses large and small. ORBAI's business model is to license the development tools and a developer toolkit to customers and 3rd party developers that work with them, then provide access to the AGI as SAAS, enabling our developer network to connect to it with data and applications for various customer needs.

ORBAI is a California-based startup developing artificial general intelligence to power smart devices and intelligent online professional services (www.orbai.com). On Sept 30, 2021, ORBAI launched an equity crowd-funding round on www.StartEngine.com/orbai to fund the development of the core AGI technology that will be licensed to companies doing devices and AI professional services.

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