What kind of AI is NEC working on?

Nowadays everyone is talking about AI. You can read about it in the newspapers and see it on TV. All the leading tech companies are feverishly working on it. AI is set to transform the world. And soon. Or at least that is what you would assume given the optimistic predictions and applications of AI enthusiasts.

Unfortunately, the reality is a bit different. AI is coming. There is no doubt about that. But its current state of evolution is nowhere near as advanced as you might expect. The era of omniscient artificial intelligence is still quite a ways off. It is, however, where we are headed. NEC has been steadily developing AI technology for years, and our goal has always been the creation of high-level artificial intelligence comparable to the human mind. For instance, we have been working on image recognition technology - a key constituent of AI - for a half century. Starting with character recognition, this technology has evolved into fingerprint identification and face recognition. By refining and expanding this technology to enable understanding of human behavior and cognitive states, NEC is hoping to create intelligent systems capable of understanding and analyzing human actions and events in the real world. We are also involved in the development of data analysis technology, including deep learning systems, which currently provide the best solutions to many problems in image recognition, speech recognition, and natural language processing. The extremely high precision of deep learning, however, means that it cannot present the basis of its predictions in a way comprehensible to humans, making it unsuitable for applications where critical judgment and thinking are required. To address these issues, NEC has developed Heterogeneous Mixture Learning Technologies that can analyze hidden patterns in data and explain the basis of its predictions.

As our technology evolves, we are able to use that technology to drive even greater advances. Currently, we are examining how image recognition technology can be used for the betterment of society by collecting and analyzing data and using various analytic engines. Predictions can be made on the basis of this analysis, allowing us to prepare for and prescribe future developments. This is exactly the kind of thing we are talking about when we refer to value creation by AI, and it is at the core of our efforts to transform the world through technology.

Today AI has already made it possible for factories and industries to operate more efficiently than ever before. In the years to come, AI will increasingly interact with us in our everyday lives, as we shop, work, and play. It will also collaborate with us in developing safer cities, more reliable infrastructure, and more effective crime detection and emergency response. Getting to this future means that we must continue to push forward with AI research and development, while at the same time maintaining focus on the problems we wish to solve. In so doing, we will not only change the world, we will create a whole new world.
We hope that we will be able to contribute to the achievement of a better society through our AI technology. To appeal the strength of our AI that technology and underscore the philosophy behind it, we have created the brand, “NEC the WISE.”

“WISE”, of course, is an adjective meaning intelligent and knowledgeable. By putting “the” before it, we make it “the WISE”, a noun that brings to mind a sage, that is, someone venerated for their wisdom. What’s important here is that it’s in the plural form. In other words, it refers to NEC’s numerous AI technologies, both existing technologies that have been developed over an extended period of time, and technologies that will be created in the future. All of these technologies will be integrated in “wise” systems to create social value that will address the issues our customers face today and in the future. That commitment is expressed in “NEC the WISE.”

We’ve also created a logo to support the “NEC the WISE” brand. It’s a simple logo featuring a cube in the center of an opaque triangular pyramid. The keen edges and futuristic shape of the pyramid represent our determination to drive a firm wedge that will serve as a cornerstone for the future in an unstable world. The cube in the center of the pyramid means that the core of people’s wisdom will be concentrated in the center.

“NEC the WISE” will continue to evolve. Our corporate slogan is, “Orchestrating a brighter world,” which simply reflects our goal of co-creation of new value in concert with people all over the world and the creation of a future where people live brighter lives filled with abundance and prosperity. We believe “NEC the WISE” is one of the essential keys to realizing this “brighter world,” providing a powerful set of prescriptions for solving social problems. With that in mind, we are determined to promote NEC’s “wisdom” in AI to the world.
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Remarks for Special Issue on AI & Social Value Creation
Social Vision in the Age of AI – Work, life, and the pursuit of a new ethics –
NEC’s Vision for AI in Social Value Creation

Creating new social value
Safety Operations Supporting the Security of Urban Locations
The Retail Industry Offers New Experiences for Consumers
"NEC the WISE" for City Transportation
Industrial Operations Supporting Industry 4.0

A world-leading array of AI technologies
Video Face Recognition System Enabling Real-time Surveillance
Optical Vibration Sensing Technology Improves Efficiency of Infrastructure Maintenance
Automated Security Intelligence (ASI) with Auto Detection of Unknown Cyber-Attacks
"Profiling Across Spatio-temporal Data" Technology to Enable Detection of Suspicious Unregistered Individuals among Multiple Surveillance Camera Images
Customer Profile Estimation Technology for Implementation of Precise Marketing
Quality Control in Manufacturing Plants Using a Factor Analysis Engine
From Prediction to Decision Making – Predictive Optimization Technology –
Dynamic Bus Operations Optimization with REFLEX

NEC’s open innovation is generating exciting developments in AI technology
Achieving a more omoroi society through the application of the brain's yuragi (fluctuations)
   to bring computer energy consumption down to an amazingly ultralow level
What is Brain-Morphic AI?
Combining AI with simulation technology facilitates decision-making even under conditions where data is limited
AI Technology Brand "NEC the WISE"