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Intelligent Information Processing

— Toward Building Smart and Flexible Computers —
<http://www.logos.t.u-tokyo.ac.jp/>

Overview

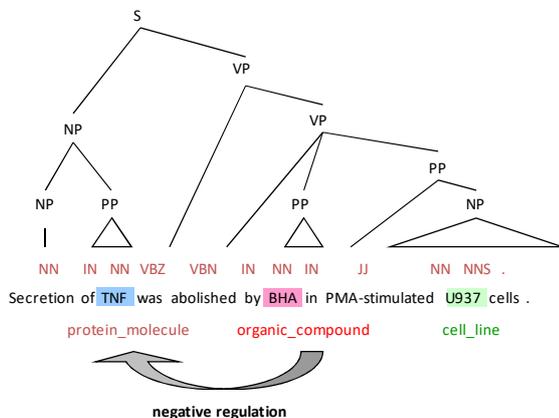
We are working on various research topics on how to enable computers to perform intelligence information processing, ranging from fundamental artificial intelligence (AI) technologies to building practical applications. Currently, we focus on natural language processing and game AI as the main research topics in the lab. We welcome students who are interested in a) building machines that understand language, b) building games equipped with smart AI, c) learning logic and mathematics for AI, and d) learning and improving programming skills by building real applications.

Research Topics

Natural Language Processing

Natural language processing is a field of AI that aims to build machines that can handle natural languages such as Japanese and English. We work on fundamental language processing techniques such as part-of-speech tagging and syntactic parsing as well as applications such as question answering and machine translation.

Our recent research topics include accurate natural language processing using deep learning and building world models for deep language understanding.



Artificial Intelligence for Games

Games have long been used as a test-bed for AI research. We have been developing novel algorithms and machine learning techniques for game AI, using traditional board games such as Shogi, Go, and Mahjong.

Our recent research topics include deep reinforcement learning technology, imperfect information games such as Poker and Mahjong, and modern video games that are much more complex than traditional board games and require real-time decisions.



Other topics

Natural language processing and game AI are not the only research topics in our lab. Students are encouraged to pursue what they believe is scientifically important.

Message to Prospective Students

We welcome proactive students. Research in a university is not an extension of lectures or classes. You are the one who decides the direction of research, collect resources and information needed to achieve your goal, and implement algorithms to carry out experiments. Unlike in classes, nobody is doing the same thing as you. You are, however, not alone in the lab. We will provide support and environment for you to pursue your research interests. We hope that you will feel great achievement in building something that has never existed previously and makes the world a better place.