Scott Fahlman

Research Faculty Emeritus - Contingent at Carnegie Mellon University
Pittsburgh, PA, US

Scott Fahlman has worked in many areas of Artificial Intelligence, including the use of massively parallel machines to solve AI problems.

Biography

Scott Fahlman is a Professor Emeritus in Carnegie Mellon?s School of Computer Science (SCS). That means Scott is formally retired, but still active in research, advising, and departmental activities. Scott's home department is the Language Technologies Institute (LTI). He is also emeritus faculty in the Computer Science Department (CSD). As a researcher, Scott is primarily interested in Artificial Intelligence and its applications. He has worked in many areas of AI: planning, knowledge representation and reasoning, image processing, natural language processing, document classification, artificial neural networks, and the use of massively parallel machines to solve AI problems. Scott is also interested in the use of AI techniques to build better user interfaces and context-aware systems. Currently, Scott is working on Scone, a practical Knowledge Base System (KBS) that can represent a large body of real-world knowledge and that can efficiently perform the kinds of search and inference that seem so effortless for us humans. This work is based in part on the NETL system that Scott developed for his Ph.D. thesis in the late 1970s, but the Scone system is designed to run on standard workstations and servers rather than on special parallel hardware. Scott's research group has worked on a number of applications of Scone, with a special focus on using Scone to support knowledge-based natural language understanding and generation. Scott believes that Scone-like knowledge base systems will be important tools in the future, perhaps used in even more ways than database systems are used today. Scott is also working on some ideas for new learning architectures for deep-learning networks, inspired in part by the Cascade Correlation architecture that he developed in 1990 with Chris Lebiere. Scott is a Fellow of the Association for the Advancement of Artificial Intelligence (AAAI). Scott was one of the core developers of the Common Lisp language, and his research group developed the CMU Common Lisp implementation which formed the basis for many commercial Common Lisp systems, and now is maintained as open-source software, along with a split-off version, Steel Bank Common Lisp. In 1982, Scott proposed the use of :-) and :-(in posts and Email messages. These are generally regarded as the first internet emoticons, and the text-only ancestors of today?s graphical emojis.

Industry Expertise

Writing and Editing, Research, Education/Learning, Computer Software

Areas of Expertise

Artificial Neural Networks, Computer Science, Artificial Intelligence, Knowledge Representation, Machine Learning

Affiliations

American Association for Artificial Intelligence (AAAI) : Fellow, Association for Computing Machinery : Member

Event Appearances

Scientific and Artistic Creativity
Regional Arts Education Day

Education

Massachusetts Institute of Technology
M.S. Electrical Engineering and Computer Science

Massachusetts Institute of Technology
Ph.D. Artificial Intelligence

Massachusetts Institute of Technology
B.S. Electrical Engineering and Computer Science

Accomplishments

Outstanding Technology Contributions Award
2013 Web Intelligence Consortium