

New Cornell institute will apply artificial intelligence to decision making and data searches

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Suppose the computer from the starship Enterprise or the HAL 9000 from "2001, A Space Odyssey" had been scanning intelligence data four years ago. Perhaps it would have made the connection humans missed between terrorists and flight schools. Or suppose such a computer were designing airline flight schedules: You might get home for Christmas a little faster.

These are just some of the possibilities of "artificial intelligence," or AI, which is not really about making computers that talk back but rather about using computers for the things they are good at: dealing with massive amounts of data or problems with a vast number of choices. These are the sorts of problems that are being examined by Cornell University's new Intelligent Information Systems Institute, launched this year with a \$5 million, five-year grant from the U.S. Air Force Office of Scientific Research (AFOSR). In keeping with university policy, none of the research will be classified.

Other problems on the table include game theory, information retrieval and automatic verification of software and hardware, according to Carla Gomes, Cornell associate professor of computing and information science and applied economics and management, and director of the new institute. Some 20 other Cornell faculty members are affiliated with the institute, Gomes said, including not only computer scientists but also faculty in operations research, applied economics, mathematics and

engineering. Visiting scientists will be more the rule than the exception, she added, with at least 10 scheduled to arrive this summer.

The institute dedicated its new facility in Upson Hall April 21 with a ribbon-cutting attended by AFOSR officials and researchers from the Air Force Research Laboratory in Rome, N.Y., with which Cornell has close research ties. The laboratory also collaborates with Cornell in the Information Security Institute headed by Fred Schneider, Cornell professor of computer science.

The newly remodeled space includes computer terminals that provide access to the institute's dedicated computer cluster, a high-performance computer made up of a cluster of 12 Intel processors operating in parallel. But the main purpose of the spacious facility, Gomes said, is to inspire collaboration among scientists. "There are whiteboards everywhere," she pointed out, "and open workspaces, stimulating the exchange of ideas."

The creation of the institute has created a buzz in the academic community, according to Robert Constable, Cornell's dean of computing and information science. "At one time Cornell wasn't even present in AI, but now we're being recognized as one of the top places, and we're seeing it in the applications to graduate school." This year, he said, there have been more applications from students wanting to work in AI than any other field, and more of those accepted have decided to come to Cornell than ever before.

Source: Cornell University

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