Stanford | Stanford Data Science Initiative

Overview for SDSI Affiliates Program Corporate Members

Introduction

Data is at the center of a new revolution that is contributing to knowledge, enabling new business models, and solving some of society's most important problems. But to harness the full potential of massive data, sophisticated methods for organizing and analyzing the data are needed. The Stanford Data Science Initiative (SDSI) is a university-wide multi-disciplinary organization with two goals: to conduct fundamental research on novel data management and exploitation techniques, and to develop complete data-based solutions for pressing scientific and engineering problems that face society and corporations. The SDSI's core competency is computer science, statistics, and other foundational engineering disciplines. However, SDSI is distinctly multidisciplinary and has major collaborations with health care, social science, biology, energy, transportation, and other fields.

Corporate members are an integral part of SDSI. Relationships between companies, faculty, and graduate students provide everyone with valuable insights on opportunities, problems, and solutions. Corporations are the most important path to commercialization at scale and achieving societal impact. SDSI works closely with diverse industries including information technology, communications, social networks, finance, insurance, health care, retail, manufacturing, utilities, oil and gas, and transportation.

Research Agenda

Corporate members have an extraordinary opportunity to inform and influence research projects. The SDSI research portfolio includes large flagship projects as well as individual projects. Flagship projects are grand challenges such as exploiting real-time data streams from numerous and dissimilar sensors and other sources, more efficient health care with improved outcomes, and understanding how ideas and information propagate throughout society. Flagship projects are conducted by teams of faculty and graduate students from many different disciplines, with the support of corporate members.

Individual projects are typically with one or two professors and their graduate students, often with the engagement of at least one corporate member. Possible research topics are not limited in any way and evolve over time. A few examples of current research topics include managing uncertain or approximate data and models, data cleansing such as entity resolution and graph alignment, data protection and privacy, large-scale computing and simulation environments, machine learning and data mining, and data visualization.

SDSI Research

Corporate membership fees provide unrestricted support for SDSI research where the emphasis is on two-way communication between researchers and companies. Companies have an opportunity to watch research as it unfolds. This is in contrast to sponsored research with its focus on predefined deliverables. Experience has shown that the most productive and innovative research at Stanford is based on unrestricted funding and close communications with industry.

Corporate funding is also used to support a repository of useful data sets and data analysis tools. The data sets include Stanford generated scientific data, as well as sets provided by corporations. SDSI corporate members are encouraged to provide their data sets, since data availability makes it easier for researchers to focus on problems that are relevant to the corporate member. The tools in the repository include solutions developed by SDSI. In general the data sets and tools will be available to corporate founding members, except that some data sets may be restricted as specified by the donor.

Member Benefits

Corporate members provide valuable financial support and leadership, and receive substantial benefits. SDSI offers two membership levels: Founding and Regular members. Both types of members receive extraordinary access to faculty and students and extensive opportunities to learn about emerging research results at retreats, conferences, seminars, and informal interactions. Regular and Founding members also have opportunities for informal collaboration on research projects, hosted visits to Stanford, and student recruiting opportunities. Founding Members receive additional benefits including membership on the SDSI Advisory Council, opportunities to advise the research agenda, an office on campus, a faculty liaison, custom workshops at Stanford, and faculty and student visits to companies.

Open Source IP

Modern data science is revolutionizing research and changing society. SDSI focuses on the fundamental challenges of data, computation, information, and statistics. The goal is to conduct world leading research in data science and its applications in an open and collaborative environment. The ability to share ideas, tools, data, and results openly and without barriers is essential for collaboration with researchers at Stanford and elsewhere, and essential for having impact in the data science community.

SDSI researchers will use and develop open source software, and it is the intention of all SDSI researchers that any software released will be released under an open source model, such as the BSD open source license. SDSI is open to all Stanford faculty who share this goal.

Contribution and Term of Agreement

Regular Membership is $100,000 per year and Founding Membership is $500,000 per year. Companies are encouraged to develop long-term multi-year relationships. Companies may provide additional funding above the membership fee to support an area of on-going research with faculty participating within the program. These contributions will be used to fund research projects, the SDSI data and tools repository, and other programs and activities. The Agreement is considered renewed automatically upon each subsequent annual payment, and may be terminated by written notice from either Stanford University or the company to the other.

Campus Representative and Visiting Scholars

Founding Members are provided an office on campus for a campus representative or Visiting Scholar. Founding Members are encouraged to take advantage of this opportunity, because it facilitates highly productive interactions. Campus representatives and Visiting Scholars remain employees of the company and are not entitled to any salary or benefits that accrue to Stanford employees. Regular members have the opportunity to send a visiting scholar for an additional fee of $60,000.

Further Information

For further information, please contact Kevin Koy, Managing Director, at kkoy@stanford.edu, office +1.650.497.2946.