



Case Study

BASF

BASF's research and development strengthened by CSAIL AI technologies that enable greater innovation.

BASF is the world's largest chemical company with the goal to "create chemistry for a sustainable future". The innovations based on chemistry play a key role in three areas: Resources, Food and Nutrition, and Quality of life. Chemistry, as a cross-sectional technology, plays a critical role in addressing future challenges and provides solutions to questions that involve human concerns around raw materials, environment, climate, food, nutrition, and overall quality of life. Trends, such as artificial intelligence, drive innovation processes at BASF that deliver impulses and determine the topics that accelerate research and development solutions.

As the Head of Scouting and Partnerships (of North America), Brian Standen's role is to maintain BASF's brand and vision by learning about emerging technologies in startups, development within academia, and collaborations with enterprises in the effort to increase efficiency and overall innovation of BASF's research platform. In furtherance of this goal, BASF joined SystemsThatLearn@CSAIL, the lab's AI initiative in November of 2017, with Standen serving as the lead for the company. This program offered through CSAIL Alliances provides a gateway for BASF to connect to the latest cutting-edge research (Artificial Intelligence, Data-Discovery, Computer Systems, etc.) and access opportunities to work with CSAIL researchers on innovative solutions for challenges central to BASF.

"External collaborations for BASF is important from our company standpoint because they improve longevity and innovation. Looking outward and finding researchers who are working on topics that we can improve our research internally is a fundamental principle upon which we stand." – Brian Standen

BASF is currently working with several CSAIL researchers to discuss major challenges the company is forging to solve, such as world hunger, thirst, and sustainability. With guidance and resources from CSAIL Alliances, BASF was able to host a hackathon that was designed to challenge students to use novel approaches for solving a complex computer vision problem important to BASF. The topic was focused in advancing sustainable agriculture and the challenge was to distinguish weeds from crops using image analysis and data science skills. The event was a tremendous success, attracting a group of 11 committed students from multiple departments and technical backgrounds. Both BASF and CSAIL students were pleased with the engagement throughout the event. Students walked away with a better understanding of BASF and the exposure to real-world challenges. And BASF was provided with innovative approaches to their agriculture problem, as well as able to connect with CSAIL students who were enthusiastic to become a part of BASF's team.

"Through this Alliance program we were able to not only connect with students but engage with them and strengthen the bridge between industry and research.", Standen states. The relationship with CSAIL students is critical to BASF's research, as it helps to address the need for creative approaches that build upon innovative research and form successful partnerships. The collaboration through the hackathon raised BASF's brand to a higher visibility on campus and allowed the company to actively participate in digital discussions that deepened their engagement with CSAIL, MIT and the community.

For more information about CSAIL Alliances industry engagements, please visit:

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