BY LORI FERGUSON

NED SAHIN '90

Through the Google Glass

NED SAHIN '90 CAN'T PINPOINT WHEN he first heard the siren call of science, but he knows his fascination for the discipline began very early on. "When I was 4 or 5 years old, I sat for a caricature artist," he recalls. "At this point, I don't remember what I said to him, but he sketched me in a lab coat with a test tube in each hand, so I was clearly already talking about science."

Sahin hasn't stopped since. As a student at Dexter from 1985 to 1990, he was captivated by Mr. Webster's science classes. "His demonstrations were great, and his obvious love for science was infectious." As he matured, Sahin only strengthened his interest in science. He earned a bachelor's in biology and neuroscience from Williams College, a master's at MIT in the brain and cognitive sciences department, a Ph.D. in cognitive neuroscience at Harvard, completed a post-doctoral fellowship at University of California San Diego Medical School, and was awarded a National Institute of Health (NIH) training grant to the Salk Institute and the Institute for Neural Computation. He also spent a year studying at Oxford. Today, the neuroscientist and self-described neurotechnology entrepreneur, leads Brain Power, LLC, the company he founded to translate "neuroscience innovations into tangible products that can benefit many people in their daily lives."

"I've always been interested in understanding the way things work," Sahin explains. "As a kid, I would sneak items out of the house—blenders, calculators, that sort of thing—and take them apart to see how they functioned. Once I'd figured it out, I'd furtively bury them in the backyard. Unbeknownst to my parents, it was an appliance graveyard out there!" Sahin also remembers appropriating the power supply from his dad's electric train set to take his chemistry experiments to the next level. "I had my mad scientist's lab down in our basement; it's a wonder I didn't blow our house up," he says with a laugh.

Yet, Sahin didn't spend all his time immersed in study; he also took great delight in entrepreneurial activities. As an 8-year-old, he and his brother collected lost golf balls from a nearby course and resold them to players through the fence as they passed by. "My brother and I resold the balls for much cheaper than what they went for in the stores, although we *did* charge more for the colored balls because we thought they were special. We thought we were the consummate businessmen; I suspect the golfers just thought we were cute kids." Sahin later moved on to fixing and accessorizing golf carts for hire, and then began repairing computers in high school. "Entrepreneurship was fun—I was in it for the score, for the doing," he says.

Sahin maintained his entrepreneurial spirit throughout his educational journey, serving as a principal investigator for an Army project involving a wearable brain sensor system while in graduate school and joining a friend to win business plan competitions as a post-doctoral student at UC San Diego Medical School. He was able to keep up his research, publishing in *Science* and *Nature* journals. "I was doing science, but also getting a feel for the pace of business," he explains.

Despite experiencing success in both spheres, Sahin felt unfulfilled. "I was struggling to find a place where my skills were fully deployed. I felt that there were parts of my social being that worked against me amongst my scientist peers, and at the same time felt like my science wasn't affecting people in their daily lives. In the end, I didn't feel like I was contributing maximally to science or to society and it was frustrating." Sahin decided that he needed perspective, so after completing his post-doc, he and his wife sold everything, took off with no address or assurance of a next career step, and travelled the world, visiting 23 countries in 12 months. "It was centering to be left to one's own devices for a year," Sahin observes, "...or, rather, one's lack of devices: we traveled without phones or any mobile device. When I returned, I realized that my path was to launch a scientific start-up. It hit

me that I had always been both a scientist and an entrepreneur—I just needed to bring those two threads together rather than always hiding one world from the other."

The result of that decision was Brain Power, LLC, the company Sahin founded at the end of 2013 with the goal of harnessing technological innovations to address what he describes as "the most pressing brain-related challenges of the human condition." At present, Sahin and his team employ wearable computers like Google Glass to teach people with autism practical life skills like eye contact and emotion decoding, and to measure their progress quantitatively.

Reactions to their efforts, Sahin says, have been absolutely amazing. "We've received a uniformly positive response from all the stakeholders affected by autism, and in this community, where there are many competing agendas, that's rare. Autism is very different from other medical conditions—it's not a disease and there's not a single path to treatment. The medical picture is complicated and there's a lot at stake, and it is deeply personal for families. But everyone—parents, teachers, doctors, autism-specialized therapists, and advocacy groups—has responded positively to what we're doing. It is humbling and exciting."

The project has caught the attention of Google, who has supported Sahin in many ways. "They have been remarkably generous," he says. "They are truly living up to their humanitarian mission." The project has also caught the attention of the press, with articles appearing in more than 100 outlets, including *The Boston Globe, TechCrunch, Wired*, and *CBS TV*.

Much remains to be done, Sahin says, and he has many ideas for ways in which he can utilize wearable computers and big data analytics to make a difference in people's lives. "The story will be written as we go along," he concludes, "but autism will maintain my focus for a while."

To learn more about Brain Power, LLC, visit www.brain-power.com.

Photo: Courtesy of Brain Power, LLC