NUVENTION AMONG BEST NEW COURSES, SAYS INC.

Northwestern’s NUvention courses, in which students from across the University work in teams to form businesses, were featured among the best new courses of 2011 in the April issue of Inc. magazine, a monthly for people who run growing companies. “Most entrepreneurs possess deep knowledge of their industries,” stated the article. “So why shouldn’t entrepreneurship classes be just as specialized? That’s the logic behind NUvention, a group of classes that focuses on three verticals: medical devices, energy, and Internet businesses.”

ALUMNI ENTREPRENEUR FEATURED IN FORBES

It’s been a wild ride for Nikhil Sethi (electrical engineering ’10), who was recently named one of Forbes magazine’s All-Star Student Entrepreneurs. Sethi and fellow McCormick student Garrett Ullom founded their startup Adaptly in McCormick’s NUvention: Web course last year. Adaptly is a service that allows businesses to buy ads simultaneously on multiple social network ad platforms. Now the company has 20 employees and a Manhattan office.

A profile in Forbes titled “All-Star Student Entrepreneurs: Social Media Ad Mogul” followed Sethi’s entrepreneurial trajectory, stating, “Sethi projects 2011 revenues of at least $10 million, with explosive quarter-over-quarter growth of 70 percent... As companies and agencies scramble to find the best way to advertise on social media, Adaptly will surely encounter competition. But Sethi has very big dreams. ‘I think we’re in the beginning of building something really massive,’ he says. ‘Once you solve distribution, you can do anything with it.’”

COMPUTER JOURNALISM STARTUP LAUDED IN NEW YORK TIMES

Narrative Science, a company started by two McCormick professors that uses a computer program to automatically generate news stories, was featured in a September article in the New York Times. The program, said the article, “offers proof of the progress of artificial intelligence—the ability of computers to mimic human reasoning.”

The company was started by Kris Hammond (top), professor of electrical engineering and computer science, and Larry Birnbaum (left), associate professor of electrical engineering and computer science, to commercialize Stats Monkey, a software program that automatically generates sports stories using commonly available information such as box scores and play-by-plays. The program was the result of a collaboration between McCormick and Medill School of Journalism, Media, Integrated Marketing Communications.

Hammond and Birnbaum and students working in McCormick’s Intelligent Information Lab created algorithms that use statistics from games to write text that captures the overall dynamic of games and highlights key plays and players. Generated along with the text is an appropriate headline and a photo of what the program deems the most important player in the game.

Hammond said he has high hopes for the technology. “In five years,” he says, “a computer program will win a Pulitzer Prize—and I’ll be damned if it’s not our technology.” See related story on page 22.

NPR HIGHLIGHTS HARTMANN’S RESEARCH

Mitra Hartmann, associate professor of biomedical engineering and mechanical engineering, developed a model that will allow her to simulate how rats use their whiskers to sense objects around them. The model enables further research that may provide insight into the human sense of touch.

Hundreds of papers are published each year using the rat whisker system as a model to understand brain development and neural processing. Rats move their whiskers rhythmically against objects to explore the environment by touch. But there is a big missing piece that prevents a full understanding of the neural signals recorded in these studies: No one knows how to represent the “touch” of a whisker in terms of mechanical variables.

That’s where Hartmann’s team comes in. It aims to create a model that quantifies these mechanics. The team first studied the structure of the rat whisker array, the 30 whiskers arranged on each side of a rat’s face. Using two- and three-dimensional scans, it defined the relationship between the size and shape of each whisker and its placement on the face of the rat. With this information, the team created a model that quantifies the full shape and structure of the rat head and whisker array. The model simulates the rat “whisking” against different objects and predicts the full pattern of inputs into the whisker system as a rat encounters an object. The simulations can then be compared against real behavior.

Hartmann’s research was featured on National Public Radio’s Science Friday, a weekly science talk show. Watch a video at www.sciencelfriday.com/videos/watch/10375.