



Computer Science partners for real world senior projects

Following the success of last year's Senior Capstone projects, Professors Tefvik Bultan and Rich Wolski invited companies to again propose projects to students in UC Santa Barbara's Computer Engineering and Computer Science programs.

"I see this as a great example of partnership between industry and the University at the educational level for the benefit of everyone involved," said Professor Bultan. This year students had more than ten projects to choose from as well as the option to create their own. In the end twenty students formed four project teams with four company partners.



Tefvik Bultan
Professor Computer Science

Over the last six months three local Santa Barbara companies Novacoast, Callwave, and Rightscale along with Google have worked with students to design, engineer, and implement significant software projects. This year's teams included a wide range of software applications at the forefront of computer technologies.

Partnering with Callwave, the **Cyborg Mail Messaging for Android (CMMA)** team is bringing



voice-to-text applications to Google's new open cellphone platform, Android. CMMA's software allows users to view the contents of their voicemail messages at a glance using Callwave's "gist" service. CMMA's software also parses each message for phone numbers, contact names, addresses, websites, and email addresses allowing users to quickly access rich content through a single touch.

Phase 2 is working to make the computer networks we use everyday safer. Working with Novacoast's security group the team is creating an automated system that checks for network vulnerabilities through powerful logging and remote code execution. Typically these security approaches have been implemented separately and sometimes at significant cost. By bundling these techniques together and making them more accessible to network

administrators, the UCSB team is making all of our information more secure.



Chris Wilcox and Shane Anello of **Connect RD** are also partnering with Novacoast to create simple, inexpensive, and easy to use video-conferencing on open source software. Leveraging Novacoast's experience in open source software, the team is creating a video conference tool that is completely web based, requiring no installation, allowing the system to be easily accessed and administered.

"UCSB is critical to our company's success" Eron Howard, VP Development at Novacoast, notes "We've been really impressed with the nine students we've worked with on the capstone projects this year, and three of them are joining us this summer."

Team Picard is rising to the challenge of predicting what movie you'll watch next. Using a data set of 480,000 users provided by Netflix, Team Picard is leveraging open source search software called Hadoop in partnership with Google and Rightscale to recommend movies that you'll like based on your social networks' likes and dislikes.



In addition to the class requirements two of this year's projects, CMMA and Team Picard, are entering million dollar programming contests for Google's new phone platform Android and Netflix's movie recommendation contest respectively.

"Our students are working on issues with industry at the cutting edge of technology," said Professor Wolski "Six months after our class ended last year we started seeing large companies like IBM announcing similar projects in search technologies and visual voicemail."



Rich Wolski
Professor Computer Science