



**Davidson Fellow
Tony Wu**

(\$10,000 Scholarship Recipient)



Personal Info

Tony Wu
Age: 17
Irvine, California

School, College and Career Plans

As a senior at University High School, Tony will continue to explore his interests in science, computer technology and physics. This summer, he will attend the Summer Ivy Scholar Program at Yale University. In the future, Tony plans to pursue a degree in either computer science or electronics engineering.

Davidson Fellows Submission (*Technology*)

In his project titled "A Category Oriented Web Search Engine Based On Round Robin Learning And Ranking Algorithm," Tony designed a new and more efficient way to search the Internet, rank relevant Web sites and gather information. Utilizing a complex Round Robin learning and ranking algorithm, Tony indexed more than 40,000 Web pages as training and testing data, and used this information to calculate the optimal decision boundary and Euclidean distance for categorizing web pages. Tony's new Internet search method has tremendous implications in an information-based society, including potential uses in tracking terrorist activity on the Internet and academic research.

Biography

Tony's biggest challenge with his project was finding a way to objectively compare and quantify the quality of Internet search returns. After receiving advice from Professor Jeffrey D. Ullman and Professor Gio Wiederhold at the Computer Science Department of Stanford University, Tony designed a statistical method to measure the relevance of the Web pages to a particular query.

Tony's love for science is great -- he was a semifinalist in both the 2004 Biology and 2005 Physics Olympiads. In addition to his regular classes, Tony took Advanced Placement exams for AP Biology, AP Environmental Science and AP Physics through independent study since these AP classes were not offered to his grade level.

In his spare time, Tony enjoys playing the tuba and has performed in Carnegie Hall. He is a member of the Science Bowl, Ocean Sciences Bowl, Science Olympiad, Mock Trial, and Computer Programming Teams. In May 2004, Tony received first place at the California State Science Fair for his work in computer science.

Please see next page.

The Davidson Institute for Talent Development

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(Cont.)

Honors/Awards

- 2005 Davidson Fellow
- 2005 Associated Student Body Technology Commissioner
- 2005 United States Physics Bowl, tied for Second Highest Scoring
- 2005 United States Physics Team Semifinalist
- 2005 Junior Science and Humanities Symposium Regional Finalist
- 2005 Region Science Olympiad, First Place
- 2004 California State Science Fair, First Place
- 2004 Advanced Placement Scholar with Honors
- 2004 Junior Science and Humanities Symposium Regional Finalist
- 2004 Regional United Nations High School Essay Competition, First Place
- 2004 American Legion Local Oratorical Contest, Second Place
- 2004 President of Internet/Computer Club
- 2003 Orange County Science Fair, senior division Math and Software category, Second Place

Community Activities

After school, Tony coached the Math Counts team at his former middle school, Rancho San Joaquin Middle School. They won first place at the regional competition in 2003.

During the summer months, Tony works on projects to help mentally disabled students and does research under University of California-Irvine Professor Gordon Shaw at the Mind Institute.

In 2004, Tony founded the International Youth Mind Society, an independent 501(c)(3) nonprofit organization. With his knowledge of neuroscience, he set up a Web site for public awareness of kids with mental disabilities.

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