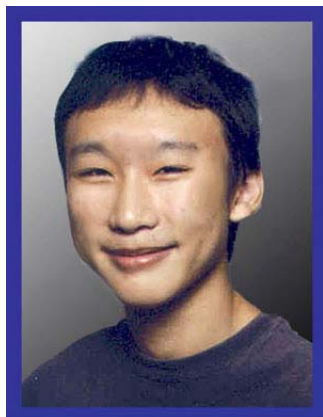


Davidson Fellow
Albert Shieh

(\$10,000 Scholarship Recipient)



Personal Info

Albert Shieh
Age: 17
Paradise Valley, Arizona

School, College and Career Plans

Albert recently graduated from Chaparral High School and will attend Harvard in the fall and major in mathematics. Albert aspires to have a career as an intellectual property lawyer.

Davidson Fellows Submission (*Science*)

In his project, “A Novel Algorithm for Automated SNP Genotyping,” Albert created a computational tool used to analyze genetic sequence variability in humans. Albert’s novel, dataset-specific clustering algorithm will result in a better understanding of gene linkages on chromosomes using single nucleotide polymorphisms (SNP), or the DNA sequence variations that occur when a single nucleotide in the genome sequence is altered. By assigning biological meaning to numerical data, this technology holds promise to find the genetic basis for Alzheimer’s disease, autism and bipolar disorder with highly targeted, personalized treatments.

Biography

Albert feels his defining quality is his intellectual curiosity which has led him to constantly explore and learn. Albert has been taking advanced math, computer science and physics classes at Arizona State University since he was in seventh grade and will graduate a year early from high school with extra credits he accrued in middle school.

Albert worked arduously for many months to complete his project. He also had to learn vast amounts of advanced math and computer science material, and how to apply it to a meticulous framework to tackle this project. Though the project was demanding, Albert always had strong family and mentor support. He also held a deep belief that his work would improve quality of life by giving researchers a powerful tool to help identify the genetic causes of diseases.

When Albert isn’t creating novel algorithms he is an avid “national circuit” policy debater which he enjoys for the challenges of focusing on detail, rigorous analysis and concurrent coverage of humanities topics such as political science, economics and critical theory. Albert has also played competitive chess for many years and was the All America Cup Champion and on the United States Chess Federation top scholastic player list.

Please see next page.



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(Cont.)

Honors/Awards

- 2006 Davidson Fellow
- 2006 USA Today All-USA High School Academic First Team
- 2006 International Science and Engineering Fair, 2nd Place Grand Award
- 2006 Arizona Junior Science and Humanities Symposium Winner
- 2006 Young Epidemiology Scholars Competition Regional Finalist
- 2005 Siemens Westinghouse Competition National Grand Prize Winner
- 2002 All America Cup K-9 National Scholastic Chess Champion

Community Activities

Albert has volunteered over 700 hours as a computer teaching assistant at the local library and senior center. He was also the youngest recipient ever of the Frances Young Community Hero Award.

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