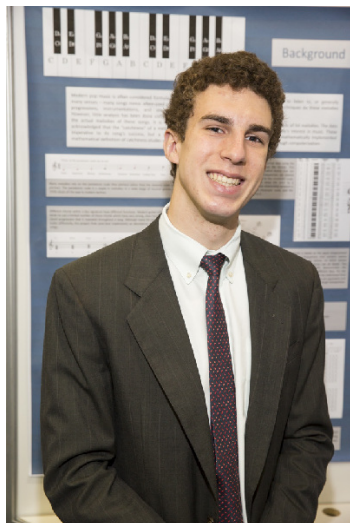


CWSF 2015 - Fredericton, New Brunswick



Craig Fiedorek

Capturing the Value of Melody

Challenge: Information

Category: Senior

Region: Calgary Youth

City: Calgary, AB

School: Webber Academy

Abstract: This project statistically analyzed the melodies of recent Billboard Hot 100 top 10 singles to determine the melodic features that characterize hit songs. The data was then synthesized into a computer program that probabilistically constructs original melodies, demonstrating the practicality of automated songwriting.

Biography

I moved to Calgary, Alberta from Houston, Texas two years ago. Music has long been a passion of mine, and I play piano, guitar, bass, and drums. I have a firm belief that absolutely everything can be described mathematically, and applied this belief to contemporary music and songwriting in my project. I foresee a very plausible future where popular music is 100% computer generated and the creativity of music production lies with the programmers who write algorithms to create different styles of music. I encourage potential science fair participants to a) combine different fields that they are passionate about and b) think radically about how the world could be different.

Awards

Value

The Manning Innovation Achievement Award - Senior Sponsor: Ernest C. Manning Awards Foundation	\$500
Challenge Award - Information - Senior Sponsor: Youth Science Canada	
Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$250
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of New Brunswick Canada-Wide Science Fair Scholarship Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of New Brunswick	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
Total	\$27 750