



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





