

# CWSF 2017 - Regina, Saskatchewan



## Dennis Krasnov

### Artificial Neural Network for Autonomous Driving

**Challenge:** Information

**Category:** Senior

**Region:** Thames Valley

**City:** London, ON

**School:** Sir Frederick Banting S.S.

**Abstract:** Autonomous driving is the future of transportation as its safer and more reliable than human drivers. I set out to see if an artificial neural network can be used to drive a car. This is a novel approach compared to the traditional software solution, as it's very flexible and adaptive. The ANN would be trained to work with any available sensors, controls, and driving conditions.

#### Biography

I am Dennis Krasnov. I live in London, Ontario. Since I was a young child I have loved science, math, and especially computers. I speak English, French, and Russian fluently, and I plan to pursue a career in engineering. I have recently learned computer programming, and I got very interested in autonomous driving. Many leading technology companies are currently researching autonomous vehicles and I was intrigued. This is now my second year doing science fairs, and now I have decided to apply concepts of machine learning to solve the problem of autonomous driving. While making this project I have learned a lot about artificial intelligence, physics, and computer algorithms.

#### Awards

#### Value

International Summer School for Young Physicists Award - Senior Sponsor: Perimeter Institute for Theoretical Physics	\$3 500
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 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
<b>Total</b>	<b>\$25 750</b>