

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

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| 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 |
| Total | \$25 750 |