Ryan S. Park

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Education

Millburn High School, NJ
Class of 2022 | GPA: 4.45 | PSAT: 1510 | SAT: 1590

5 on AP Computer Science. Current APs: Spanish, Physics 1 and 2, Computer Science Principles, US History. Learned linear algebra from MIT OCW 18.06. Wrote 130-page paper on fundamentals of neural networks with original proofs.

Research

V-BIND: Deep Geometric Transformers for SARS-CoV-2 Treatment Design
September 2020 - Present

Created novel deep learning approach to designing miniprotein drugs for COVID-19 and other spike viruses. Patent-pending. Working with Nokia Bell Labs mentor to further research.

X-Net: A Deep Convolutional Neural Model for X-Ray Threat Detection
November 2019 - April 2020

Designed novel convolutional algorithm that outperforms TSA threat detection and speed by 400% and 91x, respectively. Presented research to Ocean County College Board of Trustees.

Competitions

Regeneron International Science and Engineering Fair
2021 | Computational Biology | V-BIND | 2nd Grand Category Award

National Junior Science and Humanities Symposium
2021 | Oral Presentation - Computer Science | V-BIND | 3rd in Category
2020 | Oral Presentation - Computer Science | X-Net | 1st in Category

North Jersey Regional Science Fair
2021 | Bioinformatics | V-BIND | 1st, ISEF Grand Prize, Nokia Bell Labs Distinguished Researcher Award
2020 | Computer Science | X-Net | 1st, JEI Exceptional Investigator, KeanU Award, ACM Computing Award

Jersey Shores Junior Science Symposium
2021 | Oral Presentation | V-BIND | 1st Overall
2020 | Oral Presentation | X-Net | 1st Overall

School Initiatives

Artificial Intelligence Program | Founder, President, Course Author
September 2019 - Present

Founded first AI program at Millburn HS. Wrote curriculum and introductory AI library, EasyAI.

AI Security Initiative | Project Head, Lead Developer
November 2019 - Present

Developed facial recognition software and received approval for school usage from district superintendent. Wrote GPU-optimized C++/Python code and led team of student developers.

Computer Science Integrated Initiative | President
September 2020 - Present

Managed large-scale projects, including current sign-in system for students during school day.

Millburn Robotics Team 7405X | Head of AI Systems
November 2020 - June 2021

Directed AI-based computer vision and reinforcement-learning-based decision-making.