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Ryan Tse

Education

2015–Present **High School**, *Montgomery Blair High School Magnet Program*, *Senior Year*.
- Mathematical Physics and Quantum Physics
- Single Variable Calculus, Multivariable Calculus, and Linear Algebra
- Applied Statistics and Political Statistics
- Analysis of Algorithms and Computational Methods
- Introduction to Organic Chemistry

Experience

Summer 2018 **Pathways Intern**, *Naval Center for Space Technology Spacecraft Engineering*.
Developing an efficient non-GNSS bursty satellite ranging protocol.

2017–Present **blair3sat Project Lead**.
Leading a high school team to develop a CubeSat to measure charge density and high-energy particle emissions in the ionosphere.

2017–Present **MBHS Systems Modeler**.
Developing a global atmospheric dispersion model to predict how particles such as pollen and pollutants move through the air.

2018–Present **ORACLE of Blair Developer**, *Montgomery Blair High School Math Department*.
Developing a predictive model of the 2018 US House midterm elections.

Summer 2017 **SEAP Intern**, *Laboratory for Autonomous Systems Research*.
1st place presentation in IT division for researching neural network based approaches to vehicle trilateration. Coauthor on *Wearable interactive display for the local positioning system (LPS)* published in ACM ICMI 2017.

2015–2017 **FRC 449 Software and Controls Lead**.
Developing drivetrain control and automation software, leading the 2017 software team.

2012–Present **Boy Scout**, *Troop 1449*.
Eagle Scout, former Senior Patrol Leader, Troop Quartermaster, and Patrol Leader.

Technical Tools

Python | C/C++ | GNURadio | Tensorflow | Keras | Matlab | Java | R | Git
Autodesk Inventor | Autodesk AutoCAD | LaTeX | Microsoft Office Suite

Competitions

2017 High School Mathematical Contest in Modeling (HiMCM)
2016 HackUMBC, won Most Innovative Game sponsor award
2016 University of Maryland High School Mathematics Competition Part II Qualifier