Ryan Tse

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Education

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

Experience

2018–Present   **NRL Pathways**, *Naval Center for Space Technology*.
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 Team Modeler**.
Developing a global atmospheric dispersion model to predict how particles such as pollen and pollutants move through the air.

Summer 2017   **NRL SEAP**, *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 Developer**.
Developing drivetrain control and automation software both years. Leading the software team in 2017.

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

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

Computer skills

Python, C, C++, Java, Matlab, R, GNURadio, Autodesk Inventor, Autodesk AutoCAD, LaTeX