

Ryan Tse

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Education

2015–Present **High School**, *Montgomery Blair High School Magnet Program, Senior Year.*

- Single Variable and Multivariable Calculus
- Linear Algebra
- Statistics
- Computational Methods
- Introduction to Organic Chemistry
- Introduction to Quantum Physics
- Analysis of Algorithms

Experience

2018–Present **NRL Pathways**, *Naval Center for Space Technology.*

Developing an efficient non-GNSS satellite ranging protocol

2017–Present **MBHS Systems Team Modeler.**

Developing a pollen distribution model to predict pollen concentrations from satellite imagery of a region's ecological and geographical features

2017–Present **Blair3Sat Project Lead.**

Building a satellite through the NASA Educational Cubesat Launch Initiative to measure ion density over the South Atlantic Anomaly

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

2016–2017 **FRC 449 Software Lead.**

Developing drivetrain control and automation software; managing the software team

2015–2017 **FRC 449 Software Developer.**

Developing simple robot functionality and the modular framework for FRC 449's codebase

2012–Present **Boy Scout**, *Troop 1449.*

Life Scout, Senior Patrol Leader, Former 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