# Ryan Tse

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### Education

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

- o Mathematical Physics and Quantum Physics
- o 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.

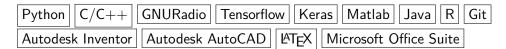
2015–2017 FRC 449 Software and Controls Lead.

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



## 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