Ryan Tse

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Education

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

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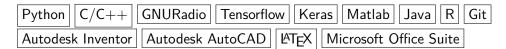
2015–2017   **FRC 449 Software and Controls Lead**.
Developing drivetrain control and automation software, leading the 2017 software team.

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

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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