

# Tarun Punnoose

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## EDUCATION

### TJHSST

#### JUNIOR

Expected Jun 2016 | Alexandria, VA

#### ACTIVITIES

- Excelsior Aerospace Club
- Advanced Rocketry Team
- Rocketry Club
- Science Olympiad
- Public Forum Debate
- Hackathons (HackRU at Rutgers and yHack at Yale)
- Latin Honor Society

## COURSEWORK

### HIGH SCHOOL

- AP BC Calculus
- AP Physics C
- Energy Systems 1 and 2
- Digital Electronics
- Analog Electronics
- AP Computer Science (Score: 5)
- AP Chemistry (Score: 5)

## SKILLS

### GENERAL

- Aircraft and Multirotor Design
- Analog Electronics
- Digital Electronics

### PROGRAMMING

- Java
- C
- Perl
- JavaScript
- Python
- HTML
- CSS
- Arduino

### CAD

- AutoCAD
- SolidWorks

## EXPERIENCE

### UDVAR HAZY AIR AND SPACE MUSEUM | VOLUNTEER

Oct 2013 – Present | Chantilly, VA

- Educate the public about aeronautics and space
- Engage visitors with hands-on activities

### US NAVAL OBSERVATORY | ASTRONOMICAL APPLICATIONS INTERN

Jun 2014 – Aug 2014 | Washington, DC

- Developed and tested astronomical data calculators for the data services page
- Completely remade the Phases of the Moon Calculator and the Complete Sun and Moon Data for One Day services
- Made these two data services into APIs that return JSON
- <http://aa.usno.navy.mil/data/docs/MoonPhase.php>
- Used 6" refracting telescope to measure sunspot number for AAVSO

### TJ EXCELSIOR AEROSPACE CLUB | Co-PRESIDENT

Sep 2014 – Present | Alexandria, VA

- Lead club in aerospace related competitions, projects, and outreach activities
- Lead an ambitious initiative to launch a UAV to near space: Project SOAR
- Help lead our Battle of the Rockets team in the Mars Rover Competition
- <http://activities.tjhsst.edu/excelsior/>

### ADVANCED ROCKETRY TEAM | PAYLOAD DESIGN LEAD

Sep 2014 – Present | Alexandria, VA

- Design an autogyro payload for a rocket that goes past 1,400 ft
- Go through full design process with PDR, CDR, and launch

### TJ SCIENCE OLYMPIAD | TREASURER

Sep 2014 – Present | Alexandria, VA

- Raise money for the club to pay for materials and trips to competitions
- Helped create, lead, and organize the team of over 50 people

### TJ ROCKETRY CLUB | WEBMASTER

Sep 2014 – Present | Alexandria, VA

- Manage club's online presence and help lead club

## AWARDS

- Best Use of MongoDB at HackRU 2014
- 18 Science Olympiad Medals
- TARC National Tournament Qualifier
- Battle of the Rockets 2<sup>nd</sup> place

## PROJECTS

- Designed and Built Quadcopter
- Leader for Project SOAR, an ultra long range UAV intended for high altitude balloon deployment at 30km
- Multitude of other RC airplane, multirotors, and UAV projects
- InstaFood, a Pebble app that lets you order food quickly (made at HackRU 2014 and winner of MongoDB prize)
- Doctorkit, an app that connects doctors and patients (made at yHack 2014)