Tarun Punnoose

Website: www.punnoo.se
Email: tarun.punnoose@gmail.com

EDUCATION

TJHSST

Senior
Expected Jun 2016 | Alexandria, VA
Activities

- Excelsior Aerospace Club
- Advanced Rocketry Team
- Rocketry Club
- Science Olympiad
- Hackathons (HackRU at Rutgers, yHack at Yale, and MHacks V and VI at UMich)

COURSEWORK

HIGH SCHOOL

- AP BC Caclulus (Score: 5)
- AP Physics C Mechanics (Score: 5)
- AP Physics C E & M (Score: 5)
- 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
- HAM Radio License

PROGRAMMING

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

CAD

- AutoCAD
- SolidWorks

EXPERIENCE

UDVAR HAZY AIR AND SPACE MUSEUM | Volunteer/Explainer

Oct 2013 – Present | Chantilly, VA

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

NASA GODDARD | Innovation Lab Intern

Jun 2015 – Jul 2015 | Greenbelt, MD

- Completed the lower level electronics and programming to interface with a small scale robotic arm
- Helped design and build hardware surrounding the robotic arm
- Create an image processing program with OpenCV that gave target coordinates to the arm

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://bit.ly/AAMoonPhase and http://bit.ly/AARiseSet
- 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
- http://bit.ly/ExcelsiorAerospace

ADVANCED ROCKETRY TEAM | Payload Design Lead

Sep 2014 – Jun 2015 | 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

AWARDS

- Best Use of MongoDB at HackRU 2014
- Best Use of Virtual Reality at MHacks V
- 24 Science Olympiad Medals
- TARC National Tournament Qualifier
- Battle of the Rockets 2nd place

PROJECTS

- Designed and built quadcopter
- Leader for Project SOAR, a long range UAV for 30 km balloon deployment
- Multitude of other RC plane, multirotor, and UAV projects
- InstaFood, a Pebble app that lets you order food quickly (made at HackRU 2014 and winner of MongoDB prize)
- Meta-Drone, a quadcopter controlled using Meta-AR glasses (made at MHacks V and winner of Virtual Reality prize)