TAHA KRARTI

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EDUCATION

Georgia Institute of Technology, Atlanta, GA ***August 2018 – May 2021 (Expected)***

- Candidate for BS in Aerospace Engineering; 3.810 GPA

Niwot High School, Niwot, CO ***August 2015 - May 2018***

- High School IB Diploma Summa Cum Laude
- AIME (American Invitational Math Exam) Qualifier, 8/15 score on AIME

SKILLS

Software and Programming: SolidWorks, ANSYS Structural, ANSYS Fluent, OpenVSP, OpenRocket, Java, Python, C++, MATLAB, LaTeX

Communication: Easily digestible presentations, technical papers

Machining and Tooling: 3-Axis CNC, ATrump, lathe, bridgeport, manual brake, bandsaw, belt sander, drill, riveter

Microsoft Office: P&ID with Visio, data analysis and preliminary calculations with Excel, Word, PowerPoint

Interests: Hiking (hiked 4 Colorado 14ers), running, piano, violin, composing music and tunes

PROJECTS

Idea for and Design of Amphibious Autonomous Underwater Vehicle (AUV)/Quadcopter/VTOL **Summer *2018-2019***

- Waterproof at 200m (using O-rings), unique design that minimizes weight and complexity to incorporate all configurations, ANSYS-tested
- Plan on finishing prototype by the end of Spring 2018 via Create-X I2P (Idea 2 Prototype) program and patenting by summer or fall of 2019

Yellow Jacket Space Program – Propulsion **August *2018-2019***

- Designed fire and acoustic suppression system for engine testing
- Involved in liquid rocket feed system design and planning to begin work on a regenerative cooling system within the next 6 months

Ramblin' Rocket Club – Structures **August *2018-2019***

- Designed, built, and launched hybrid L1-L2 solid rocket, getting my Level 1 and Level 2 NAR HPR certification in the process
- Working on nosecone, stage separation, and active drag with Georgia Tech Spaceport America Cup (SAC) team

FRC Team 1619 – Up-A-Creek Robotics – Mechanical/Hardware **Fall *2016-Spring 2018***

- Devoted 300-400 hours each season (~6 weeks) to design and build 120-pound robot to compete in FRC (FIRST Robotics Competition) games
- Designed parts, subassemblies, and assemblies for robot, made parts for and assembled robot
- In 2018, reached championship grand tournament (Einstein round robin matches) for first time in our history, achieved 3rd place in the world

RESEARCH

Vertically Integrated Projects Team – Exploratory Robotics **Spring *2019***

- Development of Mars drone glider Prandtl-M for NASA
- Development of package delivery drone technology

EXPERIENCE

Community Outreach for FRC Team 1619 – Up-A-Creek Robotics ***2016-2018***

- Set deadlines, created learning curriculums for new students, planned activities, and helped manage team expenses
- Taught summer classes, went to STEM Fairs, visited schools, hospitals, and other public places – to spread STEM

Longmont Community Work ***2015-2017***

- Volunteered at the Longmont United Hospital, talking to and provided services for sick and disadvantaged people
- Volunteered at the Longmont Museum, teaching small children (ages 5-12) how to operate Sphero robots and build with Cubelets

LEADERSHIP

Lead of Amphibious Vehicle Development ***2018-2019***

- Came up with idea, brought together diverse group to work on the many different facets of the project (e.g. Aero, Hardware, Software)
- Set up slack communication, spreadsheet tracking progress, many folders serving different purposes (e.g. CAD, Components, Organization)

Mechanical/Hardware/Design Team Lead for FRC Team 1619 – Up-A-Creek Robotics ***2017-2018***

- Met with other leads at least once a week to discuss progress, build learning curriculums, provide feedback, etc.
- Met with the team every day during build season to assign duties and discuss progress

Colorado Math Circle Member and ARML Team 1 ***2015-2018***

- Competed in the American Regions Math League (ARML) in Las Vegas as part of the top Colorado team (top 15 individuals in the state)
- Helped lead discussions, explained problem solutions to friends and the entire math circle with chalk and blackboard