Thomas Collins

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**Objective:** Find an internship or full-time engineering position within the Aerospace and spaceflight industry.

**Education****: University of New** **Hampshire** – *College of Engineering and Physical Sciences* **Jan. 2017 – May 2020, anticipated**

GPA: **3.24/4.0** | B.S, Engineering Physics | Minor in Mechanical Engineering

**University of Maine, Orono** – *College of Engineering* **August 2015 – December 2016**

B.S, Engineering Physics

**Tech Skills:** Solidworks| MATLAB | Visual Basics for Applications | Mastercam | LabView | CNC Machining | GitHub

**Extracurricular Experience:**

**UNH Students for the Exploration and Development of Space August 2017 – present**

*Vice President and Frame Lead*

* Board member, in charge of the Member Body consisting of 45 members and leading Frame Team consisting of 10 members including 3 senior capstones.
* Led mechanical fabrication of a rocket frame through design engineering and drafting with successful integration of each program’s components. Critical to our Hybrid Rocket with a propulsion unit capable of 200lbs of thrust.
* Developed 2D/3D CAD models of our rocket’s structural components. Designs reinforced with FEA and considerations to machining constraints and the physics behind the design.
* Strong experience with propulsion system design principles though iterative testing of our hybrid engine.
* In depth knowledge of propulsion system components and their respective interfaces through extracurricular research of general rocketry and specifically hybrid rocket propulsion.

**Society of Physics Students Member January 2017 – August 2018**

* Academic Society devoted to creating a community for the Physics and Engineering Physics students on campus.
* Assist undergraduates in General Physics 1-2 and Calculus 1-2

**Professional Experience****:**

**TURBOCAM, International May 2019 – present** *Engineering Intern*

* Operation of electrochemical machines and 5-axis mills, with programming of 5-axis mills through Mastercam
* Root cause analysis leading to implementation of corrective measures.
* Developed data analysis software for data management and control, expanded program’s capability by 30%. Data considerations consisted of material analysis, characterization, and testing.
* Strict attention to detail and willingness to thrive in a fast-paced engineering environment.
* Demonstration of a highly motivated mindset and drive to projects, assigned and self-directed.

**Nuclear and Particle Physics Group – University of New Hampshire August 2018 – August 2019**

*Undergraduate Research Assistant*

* Maintained hardware standards, testing standards, and designed safe processes for radioactive material. Critical to achieving a spin polarization of 14%.
* Assisted professors in development and implementation of experiments

**UNH Engineering Physics and Mechanical Engineering January 2018 – present**

*Undergraduate Researcher*

* Study of Engineering Physics Major curriculum, including Classical mechanics, quantum physics, and optics.
* Study of Mechanical Engineering Minor curriculum, including thermal systems, control systems, and fluid dynamics.

**Extracurricular Activities:**

**UNH Archery Member August 2017 – August 2019**

* Athletic club including weekly practice and yearly competitions.