Charlie Nitschelm

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**Objective:** Find an internship or research position pertaining to aerospace engineering for the summer of 2019

**Education****: University of New** **Hampshire** – *College of Engineering and Physical Sciences* **Aug. 2016 – May 2020, anticipated**

GPA: **3.81/4.0** | Honors Program | B.S, Mechanical Engineering | Physics Minor

**Tech Skills:** Solidworks | Python | MATLAB | VSM | GD&T | Machining | Welding | Autodesk Fusion 360 | CNC Milling | Water Jet

**Experience****: TURBOCAM International September 2018 – present**

*Manufacturing Engineering Intern*

* Creating and optimizing 5-axis mill tool paths using batch with feeds, speeds, approaches and retracts
* Using a Zoller Smile to precisely obtain tool measurement readings after an operation
* Conducting an analysis on tool degradation with different tool coatings for Inconel 718 to determine if the extended tool life would outweigh the costs of tool coating implementation

**National Institute of Standards and Technology (NIST) May 2018 – August 2018**

*Researcher: Mechanical Performance*

* Conducted a study on Inconel 625 in both tension and compression and stress triaxiality on axisymmetric 1018 steel
* Performed low strain rate tests on an MTS
* Designed and performed all experiments on a pulse-heated Split Hopkinson (Kolsky) Bar for high strain rates
* Compiled all recorded data on experiments and used Python to perform calculations to output useful information

**UNH Mechanical Engineering January 2018 – May 2018**

*Undergraduate Researcher*

* Designed and modeled axisymmetric 1018 steel specimens using Solidworks and Abaqus to study stress triaxiality
* Manufactured 30 Inconel 625 specimens in various rolling directions to study the effects of heating rates
* Ensured that the timeline of work would end so testing could occur at NIST during the summer of 2018

**UNH Institute for the Study of Earth, Oceans, and Space May 2017 – August 2017**

*Researcher: Data Analysis*

* Used Python to conduct a systematic search of the COMPTEL data for evidence of polarization from solar flares
* Organized necessary data sets and developed tools that will be needed for analysis
* Using the COMPTEL field-of-view, determined the number of source and background counts for each solar flare
* Performed simulations to estimate the polarization sensitivity for that event
* Created a systematic analysis of all gamma ray bursts that took place within the COMPTEL field-of-view

**Relevant Orgs: UNH Students for the Exploration and Development of Space Mar. 2017 – present**

*Co-Founder, CTO*

* Managing the Hybrid Rocket program to design, manufacture and build a gimbal-controlled hybrid engine using HTPB and Nitrous Oxide
* Attended SpaceVision 2018 with 16 team members in San Diego, California to network with other SEDS members
* Lead overall managerial duties including running all meetings and overseeing the goals of the organization
* Head the model rocketry building techniques program to master the manufacturing expertise needed
* Managed all tech leads to create a high-altitude rocket to participate in the University Student Rocketry Competition
* Created an in-depth flight simulation using MATLAB to optimize our rocket’s design to achieve maximum height

**Other Skills:** Project Management | Organizational Leadership | Creativity and Problem-Solving | Communication