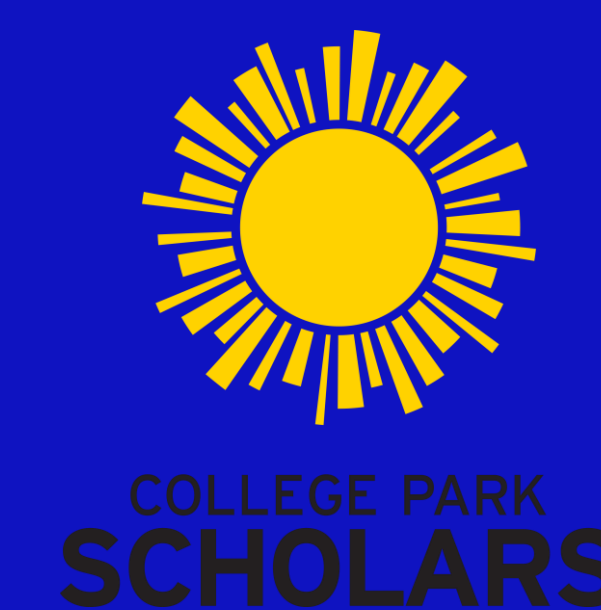




# Northrop Grumman Internship



KaLiyah Burnett

College Park Scholars – Science & Global Change Program

Mechanical Engineering

kburnet3@umd.edu

College Park Scholars Academic Showcase, April 30, 2021

## Introduction

Last semester, Fall 2020, interned at the Northrop Grumman Corporation (NGC) located in Baltimore, MD. As an intern I worked on a ton of projects. Most of the projects related electrical engineering.



An example of airborne system (F-35) that uses a radar system. Image from: <https://www.northropgrumman.com/what-we-do/air/active-electronically-scanned-array-aesa-radars/>

## Site Information:

Site Name: Northrop Grumman Corporation

Site Address: 7323 Aviation Blvd. Baltimore, Md. 21240

Supervisor: Nicholas Amen

Site Mission: Produce mission-enabling solutions for global security

Site Goals: Deliver timely, mission-enabling information and provide situational awareness and understanding to protect the U.S. and its global allies.

## Issues Confronting Site:

The issues confronting my internship site include, testing radar hardware systems to ensure the, accuracy and efficiency has improved with the new updated technology. Another issue is to design and develop technological advancements that improves the performance of radar hardware in order to maintain global security



An example of airborne system (F-22) that uses a radar system. Image from: <https://www.northropgrumman.com/what-we-do/air/active-electronically-scanned-array-aesa-radars/>

## Action Items and Tasks:

- ESD, FOD and Matlab training
- Design and Construct Hardware Protection Enclosure
- Operate System Bench
- Test Radar Hardware and Signal Processors
- Requirements verification and testing

## Impact - NGC:

Testing and verifying the Radar hardware functions as expected is essential to producing hardware that provides sufficient situational awareness for the customer.

## Impact - Personal:

Throughout this internship, I have developed valuable skills that will be applied to my future work. I developed proper and efficient troubleshooting and documentation skills. I am equipped with knowledge of how to develop and write test plans. As well as how to interpret electrical engineering drawings and verify requirements. Also, I now have experience working radar hardware systems and the Matlab interface.



Radar system integrated on plane. Image from: [radar-systems-card.jpg \(768 x 614\) \(northropgrumman.com\)](#)

## Future Work:

This summer, I will continue testing the radar hardware. My goal is to ensure the radar hardware exceeds the customer's expectations and functions as expected with the new modifications.

## Acknowledgments: I would like to thank the following people.

Site Supervisor: Nicholas Amen for welcoming me to his team as an intern

Site Assignment Manager: Charles Smith for mentoring me

Site Engineers: ABR Team for training me

Professors: Drs. Holtz & Merck for encouraging me to take on an internship

## Acronym List:

ATP – Acceptance Testing Procedure

ESD – Electrostatic Discharge

FOD – Foreign Object Damage/Debris



SCIENCE AND GLOBAL CHANGE

