

# Career Exploration Report

## Computer Engineering

by (Mason Osten), Technical Reading & Writing, DRSS

### ABSTRACT

This document provides a template for students at the Dayton Regional STEM School to complete extensive independent research focused on career exploration and to report their process in a professional technical-style report. Reports are key forms of communication in the workplace, especially in STEM fields, so the purpose of this task is to provide students with the experience of creating a similar report after conducting independent research on potential future careers fields, internships, jobs, etc.

## TABLE OF CONTENTS

Overview .....	3
Essential Questions .....	3
Potential Career & Rationale .....	3
Potential Career .....	3
<i>Possible Internships for Potential Career</i> .....	4
Potential Career 2 (Optional) .....	<b>Error! Bookmark not defined.</b>
<i>Possible Internships for Potential Career 2 (Optional)</i> .....	<b>Error! Bookmark not defined.</b>
Resources .....	4
Reflection .....	5
LogBook .....	5z

# CAREER EXPLORATION REPORT

## STUDENT TEMPLATE

### OVERVIEW

The purpose of this document is to report the research process of Mason Osten during his career exploration in Technical Reading and Writing at the Dayton Regional STEM School during the 2020-21 school year. The following sections document essential questions used to begin the career exploration process, potential career and rationales for choosing those career, an overview of the research process used during Mason Osten's career exploration, resources found and used during the process, a resolution, and a reflection of the process as well as a daily logbook of all tasks completed.

The following Driving Question was used to guide this career exploration process: How can I locate a potential internship site, college, potential career by conducting extensive independent research?

### ESSENTIAL QUESTIONS

Throughout the career exploration research process, the following questions were asked

- WHAT IS A POSSIBLE CAREER I'M INTERESTED IN EXPLORING?
- WHAT ARE THE SKILLS AND DEGREES REQUIRED FOR THIS CAREER?
- WHAT TYPE OF INTERNSHIP COULD PROVIDE ME WITH SOME OF THE SKILLS NECESSARY FOR THIS CAREER?
- WHAT AM I DOING NOW THAT GOT ME INTERESTED IN THIS CAREER?
- WHAT AM I DOING IN THE FUTURE AND HOW WILL THIS HELP ME?
- HOW WILL USE THIS KNOWLEDGE IN THE FUTURE TO HELP ME WITH SOMETHING?

### POTENTIAL CAREER & RATIONALE

This section provides a comprehensive exploration of a future career as well as rationale for choosing that career.

#### POTENTIAL CAREER

Computer engineers work with the hardware and software of a computer. They manage if a computer is working and try to fix it with the knowledge they have. Computer engineers try to make your computers better, more efficient and safer for people to be on. There are almost two types of computer engineers. Hardware computer engineers and software computer engineers. Hardware computer engineers are the people who take apart your computer to fix it. Software computer engineers are for making sure all your applications and programs run. If there is an error, software computer engineers will help.

From the website *Learn How To Become* most universities offer computer engineering as either a degree or a program of its own. This website also says to be an computer engineer people need a bachelor's degree to work as a computer engineer. From the website *Bureau of Labor Statistics* there is information on how computer engineers get paid around \$54 per hour, which adds up to a \$100,000 a year. There are more than

\$71,000 jobs current with a 2% job outlook. Looking at this rate, there will be more than a thousand jobs this year.

According to Corner Stone, a computer engineer helps people on computers, but mostly helps them fix the computer. Almost like the I.T., the computer engineer will help big companies. Computer engineers can work at a computer or work on computers. From the site *Committee for Computing Education in Community Colleges* there is a lot more information on what an engineer does, and a computer engineer does.

Overall, I want to become an engineer of some sort because I have been taking engineering classes, coding websites, 3D printing, and participating robotics. I would also like to continue this path as all my family members are engineers. Working with engineers throughout my life has been help towards being an engineer. Working in my school has also been helpful because they have auto enrolled me into engineer classes making it easier.

---

## POSSIBLE INTERNSHIPS FOR POTENTIAL CAREER

Many different internships are out there, but you can't just go and find anyone. You should first find a internship with a computer engineer first. They will be working on computers and they might show you how to do it and why they do it. Next you could find an internship on the people computer engineers work around. Depending on the computer engineer, it could be for a company, business, or self-management. Doing this will show you what computer engineers work outside of being interviewed. You also get to know the jobs they can work with.

## RESOURCES

This section provides a list of resources found during the career exploration research process (can include resources used to explore your career fields, possible internships, etc.).

- Learn How to Become (2020, November 09). *Computer engineering degrees & careers: how to become a computer engineer*. Learn How to Become. <https://www.learnhowtobecome.org/computer-engineer/>
  - Took information about computer engineering degrees.
- National Action Council for Minorities in Engineering (2013.) Types of Engineering. National Action Council for Minorities in Engineering. (NACME.) <https://www.nacme.org/types-of-engineering>
  - Information on what other types are in the computer engineering system.
- Career Corner Stone. ( 2020, December 18.) *Career Cornerstone Center: Careers in Science, Technology, Engineering, Math and Medicine*. Career Corner Stone. <https://www.careercornerstone.org/compeng/compeng.htm>
  - Told me that engineers have a hard work environment.
- Committee for Computing Education in Community Colleges (2020, December 18.) *Computer Engineering – ACM Committee for Computing Education in Community Colleges*. Committee for Computing Education in Community Colleges. <http://ccecc.acm.org/guidance/computer-engineering>
  - Received information on what a computer engineer does.
- U.S. Bureau of Labor Statistics (2020 September 01.) *Computer Hardware Engineers Occupational Outlook Handbook*. U.S. Bureau of Labor Statistics. <https://www.bls.gov/ooh/architecture-and-engineering/computer-hardware-engineers.htm>
  - What computer engineers get and what their environment is.

## REFLECTION

This section provides the reflection and resolution to Mason Osten's career exploration.

This project forced me to expand my knowledge on engineers in general and not one specific kind. I learned about electrical, computer hardware, computer software and more in general. I learned that looking into different types of engineers is good because I don't know exactly what I want to be yet, and it helps you expand your horizons. I learned how most engineers need at a least bachelor's degree in order to get a good job in computer engineering. I can see this document helping me in the future, for it can remind me what this job is about when coming to look for one. My next step in this process our taking myself out to see what a computer engineer does.

## LOGBOOK

The following logbook was kept during Mason Osten's career exploration process. It details the tasks completed during this process including sources consulted, essential questions asked and answered, as well as any other information collected each day.

Date	
12/9	Added in reflection
12/11	Added in essay
12/17	Added in citation
12/18	Finalized project