

# Hosni Berker

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## Education

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### Michigan State University | Lansing, MI

- Computer Science — BS May 2023

### Cranbrook Kingswood High School | Bloomfield Hills, MI June 2019

- **GPA:** 3.85
- Completed advanced placement: Computer Science A, Computer Science Principles, English Composition, Environmental Science, and European History
- Awarded Dean's list and Honor Roll
- Varsity Sailing, Junior Varsity Hockey, Computer Science Club, Finance Club

### Skyline High School | Ann Arbor, MI Sept. 2015 - June 2017

- **GPA:** 3.72
- Honor Roll
- Varsity Hockey

## Employment

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### Research Assistant, Earth Sciences May 2019

#### Cranbrook Institute of Science | Bloomfield Hills, MI

- Measured and recorded river water quality samples in Bloomfield Hills and well water quality samples in Flint, MI
- Performed chemical testing of well water in Flint, MI and prepared summarized findings
- Wrote a grant proposal based on the findings of the testing and presented it to the Cranbrook board of directors
- Directed groups of children to different activities that educated them about the importance of clean fresh water and sustainability
- Excavated for, and catalogued fossils to be used in upcoming exhibition at the Cranbrook Museum
- Demonstrated and explained the workings of electrical circuits for guests at the Cranbrook Institute of Science

### Seasonal Customer Service Associate June 2018 - Sept. 2018

#### Plum Market | Ann Arbor, MI

- Monitored the availability of carts, retrieving them when low and assisting in bagging groceries when it appeared that the check out area was congested.
- Assisted customers in locating items, informed customers of new products and store policies.
- Assisted store management in other departments when needed.
- Monitored front of store for cleanliness, kept front of store free of debris, spills, and other hazards

### Seasonal Production Specialist June 2017 - July 2017

#### Burpco | Kalamazoo, MI

- Operated injection molding machine: ensured machine was running within specification, mixed feedstock and kept machine adequately filled, performed

quality control on machine output, performed troubleshooting and made adjustments to ensure consistent product

- Performed final assembly of product, performed control check of individual parts before final assembly, tested product for functionality before packaging.

## **Coding Skills**

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### **C++**

- Created Ray Tracer that used a tracing algorithm to create an image of 3D spheres
- Created an Obfuscated Version of the Game Snake
- Created a full 3D game in Unreal Engine using C++. This included coding logic for projectiles, characters, and objects in C++. This also required the use of animation blendspaces and Unreal Engine blueprints that managed movement

### **Java**

- Coded an algorithm that found a word as well as taught itself how to play Tic-Tac-Toe using the properties of biological reproduction at the cellular level and fitness to find the right word
- Utilized Discord APIs to create a bot capable of chatting with users and administering tournaments.
- Coded base code for a self-evolving neural network that taught itself how to play the game of snake
- Recreated the following games: a G.U.I. minesweeper game, Snake, and Conway's Game of life
- Created a program that could access my school's website for the purpose of adding ones schedule to their calendar

### **Python**

- Coded a bot that worked interactively with Instagram
- Worked on breaking down, and understand tensorflow by self coding methods and functions for machine learning
- Created a bot that can scrape websites for data and keywords

### **Git**

- Used GitHub/Git for over 24 projects
- Understand how to correctly push, commit, and use the git framework

### **iOS & Android app development**

- Created game in Swift that used collision, sound, stored information, and screen navigation
- Created weather app for android using Open Weather Map's A.P.I. that would give current conditions in one's area

## **Extra Cirriculars**

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### **Sailing**

- MSU Sailing Club
- Rochester Yacht Club Comptitive Team
- Cranbrook Varsity Sailing Team

### **Hockey**

- Michigan Wolverines Travel Hockey
- Renegades Travel Hockey
- Skyline Summer Hockey Season
- Cranbrook JV Hockey

