

# Elijah Ballard

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## EDUCATION

Bachelor of Science, Computer Science, Minor in Public Leadership  
University of Maryland, College Park, Maryland

*Relevant courses:* Object Oriented Programming I (*Java, Python*), Object Oriented Programming II: Data Structures (*Java*), Introduction to Computer Systems (*C, Emacs*), Discrete Structures, Applied Probability, and Statistics I (Some *R*), Algorithms, Organization of Programming Languages (*Ruby, Python, OCaml, Rust*), Web Application Development (HTML, CSS, JavaScript), Introduction to Artificial Intelligence (Python, PyTorch)

## SKILLS

- **Programming Languages and Software:** Java, C, Ruby, MatLab, HTML, CSS (React, Tailwind, Bootstrap, Node.js & Express), JavaScript, Python, Processing, Arduino, PyTorch

## WORK EXPERIENCE

*Programming Counselor, TIC Summer Camp*, Bethesda, Maryland June 2023 - August 2023

- Instructed and mentored campers in creating custom mods using MCreator and Scratch, emphasizing coding principles and creativity
- Led hands-on STEM activities, including building and programming circuit cars using Arduino IDE and C++, to enhance technical and problem-solving skills
- Utilized Processing software with Java to guide campers in designing and coding their own version of the Pacman video game, reinforcing object-oriented programming concepts and interactive design skills.

*Barista, Vigilante Coffee*, College Park, Maryland September 2021 - Present

- Interact directly with dozens of customers daily to guarantee optimal, personalized experiences
- Efficiently craft beverages and food items while maintaining a high standard of quality
- Manage multiple tasks at once while collaborating with coworkers to provide efficient service to all customers

## PROGRAMMING EXPERIENCE

*JavaScript, HTML, CSS, React*

- Divided into a front and backend team, worked together to develop a web page for a local nonprofit in the area using React, Node.js, and Express frameworks
- Designed and developed local “Terp Store” using Ajax framework to allow for interactive UI to place orders
- Researched with a professor to create a portfolio for lab results using frontend and backend technology as well as implementing Flask framework
- Developed personal website using HTML, CSS, and Bootstrap to develop the user interface, then Node, Express, and React to create different backend functionality to streamline accessibility for the user

*Java*

- Designed and manipulated a Java class hierarchy to simulate a round of *Texas Hold Em*.
- Managed a media rental program that allowed for the input and output of media to consumers
- Conducted a virtual bus terminal using a hashing data structure that stored each customer’s profile and was linked to a corresponding bus
- Created and facilitated a “Tikface” social media app through the implementation of hashing and graphs

*C*

- Developed a program that accurately scans the lengths of every line and checks for tab characters to adhere to company programming style guidelines
- Built a “Nelovo” machine using a doubly linked list data structure and manipulation of bits to translate opcode instructions and assembly code from the CPU processing system

*Ruby*

- Managed phonebook with a complex class hierarchy that inserts and deletes users manually through object-oriented design
- Constructed a game board system utilizing inheritance properties to simulate a popular Battleship video game for user