

# Nabeel Elberry

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## Education

### University of Maryland, College Park

*B.S. Computer Science, Linguistics Minor*

College Park, MD

*Major GPA 3.12 | May 2024*

**Coursework:** Object-Oriented Programming I and II; Discrete Structures; Introduction to Computer Systems; Algorithms; Advanced Data Structures; Introduction to A.I.; Introduction to Data Science; Android Programming; Syntax I; Phonology I; Linear Algebra; Network and Hardware Security; Introduction to Compilers; Historical Linguistics

## Skills

**Languages:** English (Fluent), Arabic (Fluent), Japanese (N5)

**Coding Languages:** Java, C, Python, MySQL, HTML, CSS, Ruby, OCaml, Rust, Flask, ReactJS, NodeJS, Kotlin, Git

**Software:** Visual Studio Code, Vim, SQLWorkbench, Microsoft Office Suite

**Soft Skills:** Communication, teamwork, attention to detail, problem-solving, work ethic

**O/S:** Windows 11, Linux 6, Debian, macOS

## Technical Experience

### Rymn – Vocabulary Practice

April 2022 - Current

- Engineered a robust **Python**-based vocabulary program, enabling users to store and access terms and definitions for any language
- Designed a user-friendly GUI using **ReactJS**, leveraging packages like pickle lib to seamlessly save program progress, ensuring uninterrupted workflows and enhancing user experience.
- Implemented a scientifically validated Spaced Repetition System (SRS) for optimal memorization, complemented by timely desktop notifications to prompt users for review sessions, enhancing learning efficiency.

### Optimal PacMan AI

March 2023

- Taught a version of PacMan in **Python** how to optimize for multiple different factors such as avoiding enemies, eating fruits, as well as fastest time through the course using.
- Employed multiple algorithms such as **Q-Learning**, **Value Iteration**, and **Bayesian Inference** to utilize a Hidden Markov Model to find the best way through the course.

### Microcaml Compiler

October 2022

- Developed a program in **OCaml** which handles the lexing, parsing, and evaluating process normally done by a language interpreter
- Handled commands in **OCaml**, separated them into an AST and evaluated them from a context-free grammar

### Simulation of UNIX System

April 2021

- Designed and implemented a shell for **Unix** inside of **C** using dynamically allocated linked data structures to simulate files and directories
- Resulted in a working simulation of a shell with the ability to use commands such as “cd”, “ls”, etc... to navigate through a directory

## Professional Experience

### UMD Division of Information Technology - Terrapin Technology

*Hardware Service Technician*

May 2023 - Current

- Worked collaboratively with colleagues to efficiently resolve technical issues with students' personal devices, encompassing virus removal, software installation, and diagnosis and resolution of hardware issues.
- Facilitated communication among team members and utilized ServiceNow to meticulously document customer issues across various departments for streamlined workflow.

### Research Assistant – Analysis of Berber using Python

June 2023

- Learned Berber language's syntax and figured out how to analyze it to assess frequency of specific phrases within a typical conversation in the language using **Python**
- Used **CHILDES** and **CLAN** to go through the language and separate specific parts of the sentences into linguistic groups for morphological frequency analysis