

# Bryan Nguyen

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## EDUCATION

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University of Maryland, Baltimore County

Baltimore, MD

B.S. Computer Science

Exp. May 2024

**Relevant Coursework:** Data Structures, Computer Organization & Assembly Language Programming, Computer Architecture, Principles of Operating Systems, Design & Analysis of Algorithms, Software Engineering I

## PROJECTS

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### Creation of a Multithreaded Buffer in a Debian Virtual Machine

November 2021

- Built auxiliary system calls in C that enable manipulation of a buffer holding 20 blocks of data, each containing 1024 bytes worth of characters.
- Wrote concurrent code by utilizing two pthreads, two semaphores, and a mutex resulting in increased throughput and synchronized processing.
- Shrunk kernel compilation time by 60% by enabling 8 CPU threads instead of 1.

### Binary Search Tree of Discord Users

March 2021

- Developed a binary tree in C++ that stores 20 nodes representing Discord users from a sample database file.
- Implemented functionality of insertion, removal, query, and rebalance of nodes in a recursive manner.
- Maintained a balanced tree by ensuring a maximum height difference of one, between sub-trees in all parent nodes.
- Yielded logarithmic time for operations.

### Hawaiian Pronunciation

March 2020

- Programmed a translator in Python that spells out a pronunciation of a Hawaiian phrase.
- Adopted a divide and conquer approach to slice the string into manageable components to translate.
- Concatenated the substrings into a newly translated phrase with increased readability.

## SKILLS

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**Coding Experience:** x86 Assembly, C, C++, Python3, HTML, CSS, Javascript

**Software & Tools:** Ghidra, VirtualBox, PuTTY, WINSCP, Github, Git

**Soft Skills:** Flexibility, customer service, willingness to listen, multitasking

## WORK EXPERIENCE

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Science Cosmos

February 2020 - March 2020

Tutor

Ellicott City, MD

- Mentored children on how to program and assemble LEGO MINDSTORMS EV3 robots.

Five Guys

November 2022 - Present

Crew Member

Ellicott City, MD

- Conversated with the boss and fellow crew members to make certain of our responsibilities and address concerns.
- Kept track of optimal times roles should take and met those deadlines.
- Managed a multitude of roles in order to complete my own tasks and help others.