Brandon Luong

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EDUCATION

Rutgers University, Honors College School of Engineering September 2018 – May 2022
Bachelor of Science (B.S.) in Computer Science & Electrical & Computer Engineering New Brunswick, NJ

- **GPA:** 3.85 / 4.00
- **Awards & Honors:** Distinguished Scholar Award, Rutgers Scarlet Scholarship, Merton D. And Sylvia Levey Endowed Scholarship, Dean's List (all semesters)
- **Coursework:** Data Structures, Operating Systems, Systems Programming, Computer Architecture, Design and Analysis of Algorithms, Principles of Programming, Differential Equations, Discrete Math

EXPERIENCE

Rutgers Center for Critical Intelligence Studies & National Intelligence University June 2020 – Present
Data Science Intern New Brunswick, NJ (Remote)

- Designed modular program using **Python** that predicts crop yields in West Africa based on designated crops, climate & geography data **APIs**, time, location, and algorithms chosen by the user
- Identified the most accurate and fastest algorithms by comparing the percent errors between different algorithms and actual crop yields in West Africa
- Showcased program prototype to analysts in the U.S Department of Defense, as a viable tool for analysts on the ground in West Africa

PERSONAL PROJECTS

Version Control System

- Implemented a version control system in **C**
- Used **multi-threading** and **mutexes** to allow multiple clients to push, pull, commit, clone, fetch, and update repositories simultaneously
- Allowed for version checks, repository change history, and rollbacks to previous versions

Temperature/Humidifier Logger

- Constructed a temperature and humidity tracker using an **Arduino** that takes in the surrounding temperature and humidity using sensors
- Utilized **C++** to code the software to periodically measure, record, and display the temperature/humidity on a screen

Animal Identification Program

- Employed **Python** and **deep learning** to train an AI to identify certain animals designated by the user
- Returned whether the designated animal was present in the image and how many were found

File Decompression and Compression Program

- Used **C** to create a program that can compress files and directories specified by the user through Huffman coding that can later be decompressed using the same program
- Implemented binary search trees to minimize the running time of the program

LEADERSHIP

Rutgers Engineering Governing Council September 2019 – Present
Chair of Society Affairs New Brunswick, NJ

- Managed 40+ student organizations in the School of Engineering as the head of the society affairs committee
- Spearheaded a team of 11 to identify issues within engineering organizations and develops workshops, events, and online resources to solve these issues

Rutgers Engineers Without Borders September 2018 – Present
Camden Project & Software Lead New Brunswick, NJ

- Directed a team of 10+ to devise an automatic irrigation algorithm based on weather and soil moisture level using **Python** and a **Raspberry Pi** to build a smart water irrigation system in Camden
- Used the weather **API** to collect local weather data and build an efficient irrigation system

SKILLS

Proficient in: Python, C, Java, MATLAB, Ocaml
Some experience with: C++, x86 Assembly, Prolog