Eric Cristante

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OBJECTIVE

Motivated Computer Science undergraduate student with practical experience in Java, Python, and C, and a strong foundation in algorithms and data structures. Eager to enhance technical skills while contributing to collaborative, team-driven products.

SKILLS

Programming Languages: Java, Python, C, SQL, bash (limited), HTML, CSS
Tools/Frameworks: Git/Github, VSCode, Eclipse, LaTeX, AWS (S3, EC2), Flask, Figma, Jupyter Notebook
Libraries: Numpy, Matplotlib, OpenMPI
Other Skills: Microsoft Office, Google Suite, Operating systems: Windows, Linux (Ubuntu), TinkerCAD

EDUCATION

Wilfrid Laurier University Waterloo, ON
Honours Bachelor of Science in Computer Science, Minor in Mathematics Sept 2021 – Present

- **Relevant Coursework:** algorithms, data structures, object oriented programming, software engineering, databases

PROJECTS

Parallel PageRank | C, Github, OpenMPI, Linux, Slurm, Bash February 2024

- Implemented Google's PageRank from scratch to compute the PageRank scores and rank a dataset containing 300k webpages in C using OpenMPI for parallelization, acheiving a 5.4x speedup
- Developed **bash scripts for automation**, utilizing **SLURM scheduling** for job submission and management.
- Ran on the Teach cluster at the University of Toronto

Image Compression/Segmentation | Java December 2023

- Developed a Java program utilizing the K-means clustering algorithm to efficiently perform image compression and segmentation
- Achieved a **65%** reduction in storage space for particular images whilst ensuring minimal perceptual difference from the original images

Simple Linear Regression | Python, Matplotlib, Github June 2021

- Implemented a simple case of linear regression from scratch in Python using gradient descent to model the relationship between a persons age and their blood pressure
- Utilized **Matplotlib** to visualize the results

Embedded Atmosphere Monitor | C, Arduino, TinkerCAD June 2020

- Designed and simulated an embedded system in TinkerCAD to monitor CO2 and other gas levels in atmosphere
- Implemented using electrical hardware and multiple Arduino UNO's communicating using I2C protocol

EXTRACURRICULARS

Computer Science/Physics Workshop May 2022
Arthur B McDonald Research Institute Virtual

- Attended labs that covered technologies such as Git and Github, bash, and statistics and error analysis

Waterloo Canadian Computing Competition February 2021
University of Waterloo Waterloo, ON

- Competition consisted of solving five logical/mathematical problems using a language of your choice within a three hour period
- Competed against hundreds of other students