Edwin J. Ortiz

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EDUCATION

University of Delaware	Newark, DE
College of Engineering	**Graduation Date**: January 2020

Bachelor of Science in Engineering

Major: Computer Engineering | **Minor**: Computer Science

Relevant Coursework: Parallel Programming; Data Structures; Operating Systems; Databases; Software Engineering; Computer Science I, II; Digital Systems; Computer Systems Information; Microprocessor Systems.

TECHNICAL SKILLS

- **Languages**: JavaScript, HTML, CSS, C++, C, C#, Java, Python, OpenMP, MPI, MIP, SQL
- **Operating Systems**: Windows 7, 8, 10, Linux, Mac OS
- **Software**: Github, Eclipse, VMware, Virtual Box, AnyConnect VPN, Microsoft Office, Google Firebase

EXPERIENCE

High Performance Computing Research – Vertically Integrated Projects Program Newark, DE
Researcher 2016 – 2018

- Redesigned sequential programming algorithms into parallel programs to drastically improve performance.
- Worked with chemistry department to help improve a 3D Molecule Simulation named NAMD.
- Earned proficiency in OpenACC, C, Github and parallelization.
- Collaborated in a team environment with guidance from mentors.

Cloud Cryptography: Web Design – Vertically Integrated Projects Program Newark, DE
Web Developer 2019

- Implemented web applications with a Firebase database using JavaScript, HTML and CSS.
- Created projects that grants online communication via database with a friendly UI.
- Reinforced best practices for web and application development.
- Collaborated with team members to help create web applications for clients.

University of Delaware Newark, DE
Computer IT Site Assistant 2016 - Present

- Troubleshooting and diagnosing various hardware and software issues with customer computers.
- Create documentation of all customers interaction and PC components through a ticketing software.
- Communicate to customers about their troubleshooting status and report key milestones to all clients.
- Train new employees to work productively and establish high standards for successful customer relations.

Projects

Parallelizing Chemical Shift Predictions with OpenACC and C Newark, DE
Researcher 2017

- Achieved a speed-up of over 20x via reprogramming parallelization with OpenACC.
- PPM_One is used for chemical shift prediction to accurately predict chemical shifts in protein structures, which is essential for drug discovery for cures to diseases such as the HIV virus.
- Originally, PPM_One was too slow to be used in a reliable amount of time, the high end being upwards of 20 hours.
- Refactored inefficient coding practices, proceeding to parallelize code to work on multiple threads and cores on a CPU, then moved on to a GPU where we saw drastic improvements.

More project showcases are available on my website and Github.