

Christopher P. Vasquez

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EDUCATION

Louisiana State University (LSU), Baton Rouge, LA

May 2023

Master of Science, Electrical Engineering

GPA: 4.0

Bachelor of Science, Computer Engineering

Bachelor of Science, Computer Science

Related Coursework: Multicore Programming, Computer Architecture, Advanced Data Structures & Algorithms

EMPLOYMENT

Research Assistant (CPU/GPU Acceleration with R)

January 2022 – Present

Louisiana State University, Baton Rouge, LA

- Assisted with the development of a statistical, server-side application funded by the National Science Foundation
- Researched and implemented CPU acceleration for utilized R package ([MLMA](#))
- Currently researching the possibilities for GPU acceleration utilizing CUDA

Software Engineer (iOS with Swift)

July 2021 – December 2021

Louisiana State University, Baton Rouge, LA

- Assisted in developing a contact tracing mobile application funded by the National Institute of Health
- Developed the Bluetooth connectivity aspect of the application under the scrum development process
- Implemented a custom version of the [Herald Project API](#) to improve contract tracing

Software Engineer Intern (Arduino)

May 2021 – August 2021

Runatek, Dallas, Texas

- Worked on developing the software for a biomedical opioid device known as the SOTIRAS.
- Team lead for the software design and integration of a feedback control loop system into the device
- Developed software for an Arduino NANO, sensors, and actuators to monitor and maintain proper opioid levels

Research Assistant (HPC with Python)

December 2020 – December 2021

Louisiana State University - Center for Computation & Technology, Baton Rouge, LA

- Worked on an open-source HPC Python project ([CMR Project](#)) funded by the National Science Foundation
- Implemented an automated package manager into the project to better handle building coastal software
- Designed a plug-in feature to improve the modularity of importing models into the software
- Utilized various technologies such as Docker, Jupyter Notebook, Spack, and Singularity

SOFTWARE PROJECTS

Augmented Reality Training Application for Composite Manufacturing (Unity with C#) August 2021 – Present

Book Rental Application for Mobile Devices (Flutter with Dart) August 2021 – December 2021

Movie Recommendation System (Python) January 2021 – April 2021

Database System for Flight Delays (SQL) January 2021 – April 2021

Banking Transaction System Utilizing Multicore Programming (C++) January 2021 – April 2021

Text File Compressor via Huffman Encoding (C++ & ARM A32) July 2020

Motion Sensor Traffic Light via Microcontroller (Verilog) October 2019 - November 2019

SKILLS

Languages: C++, C, C#, Python, Bash, SQL, Verilog, ARM A32, MIPS32, MATLAB, Arduino, R, Swift, Dart, HTML, CSS

Software Technologies: Docker, Singularity, Git, Unity, Jupyter Notebook, Spack, Flutter, Sparx Enterprise Architect, JIRA

Other: Linux, Windows, MacOS, Visual Studio, PyCharm, R Studio, Vim, Xcode, HoloLens 2, Microsoft Office Suite

ACTIVITIES

LSU Center for Computation & Technology (CCT), LSU Ogden Honors College