Nicholas Jon Rodriguez

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NOTABLE PROJECTS

NODE.JS PERSONAL BLOG
Individual Creator

www.nickjrodriguez.com
March 2019 - Present

- Created responsive frontend using raw **HTML5**, **CSS**, & **JavaScript** with **Edge** Template Engine
- Leveraged **Node.js** and some of it libraries (**Express**, **Mongodb**, etc.) to create a functional backend that supports registering new users, creating new posts, and searching through the previously posted material
- Learned and used the **MVC** design pattern to modularize the application into logical components
- Deployed to **Heroku** with **AWS S3** cloud storage for uploaded files

SORTING ALGORITHM VISUALIZATION
Individual Creator

San Antonio, TX
September 2019 - Present

- Wrote a program that displayed various sorting algorithms using **Python** and Zelle's **Object Oriented** graphics library
- Ensured that the visualization shows all comparisons and swaps within the algorithm to compare their efficiencies

MAGENTO 2 WEBSITE CONVERSION
Individual Contributor

San Antonio, TX
August 2018 - Present

- Converted 5,000+ items stored in CSV files from AbleCommerce to Magento 2 database format leveraging **Python** and the **Pandas** Data Analysis library

RISC-V PROCESSOR DESIGN
Team Leader

Berkeley, CA
March 2016 - May 2016

- Led a team through the initial 3 stage paper design to loading the design on a Xilinx Virtex-5 FPGA
- Debugged pipelines hazards using waves and writing assembly tests in Verilog

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY
Bachelor of Science in ***Electrical Engineering and Computer Science***

Berkeley, CA
August 2013 – May 2017

Course Highlights: *Data Structures & Algorithms, Structure of Computer Programs, Computer Organization, Digital Circuit Design*

EXPERIENCE

CAVIUM
Hardware Engineer

San Jose, CA
July 2017 - August 2018

- Automated performance testing procedure by introducing variable parameters which were later randomized to cover enter set of configurations during regression tests used by the team
- Visually displayed data effectively for analysis during weekly meetings uncovering flaws in the testing procedure
- Defined Functional Coverage points in SystemVerilog to confirm that all possible Ethernet test cases were hit by random assertions defined in performance tests

BERGSTROM INC.
Engineering Intern

San Antonio, TX
May 2015 – July 2015

- Manufactured and analyzed heater core prototypes through a suite of tests along with microscope analysis to identify the dimensions for the next model
- Coordinated the development and design of an assembly piece to automate heater core assembly

MICROELECTRONICS LAB
Instructor Assistant

Berkeley, CA
January 2015 – May 2015

- Reviewed and performed lab assignments before release to ensure they were appropriate for the scope of the class
- Aided students in completing the assignment by debugging circuits, configuring machinery, and explaining course theory

SKILLS & PERSONAL

SKILLS:
Python, Linux OS, HTML, CSS, JavaScript, Git, C, SystemVerilog, LaTeX
VOLUNTEERING & LEADERSHIP:
Current Volunteer at Animal Defense League and St. Luke's Hospital, Microelectronics Lab Instructor in college
INTERESTS:
Boxing, Growing Plants, Practicing Español, Watching/Listening to live music