

Jordan Alexis Caraballo-Vega

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B.S. Computational Mathematics
University of PR at Humacao
EXP GRAD: 2019 GPA: 3.85

PROFESSIONAL EXPERIENCE

NASA Goddard Space Flight Center – NCCS High Performance Security Team

- Responsible for the engineering of software and information systems to support log analysis of systems that store and manage NASA GSFC science climate information. Configure and deploy a cluster with machine learning features and analysis.
- Responsible for advancing research on a low cost 100 Gbps firewall at the NASA Center for Climate Simulation. This includes configuring the server, testing, and installing software to boost scores and increase the server routing capabilities. Implement multiple High Speed Performance tools to test TCP and UDP internet protocols.
- Responsible for developing a novel automated method to assess, track, and report the status of compliance and vulnerabilities of multiple operating systems using the Security Content Automation Protocol (SCAP).

PREM UPR-Humacao – Partnership for Research and Education in Materials

- Lead member of the UPR-Humacao Computer Science Group responsible for developing and implementing software for nanomaterials computational simulations towards high performance computing environments.
- Manage and coordinate, independently, software and hardware updates and patches.
- Assisted and collaborate with ongoing research projects related to gold nanoparticles, data mining, clustering, image processing, and high performance computing.
- Performed well-defined tasks of a developmental nature in engineering techniques such as design, evaluation, and analysis of software and hardware architectures.

UPR-Humacao - Caribbean Computing Center for Excellence

- Served as a Chemistry intern responsible for the integration of a project plan and organization of the group and program. Simulate the Potential Energy reaction of Cephalosporin antibiotic compared to Penicillin.
- Served as Chemical Engineering intern for the integration of new techniques to the group and researches. Design, analyze, fabricate, assemble, integrate, verify and validate hardware experiments to incorporate scientific instruments in a production environment utilizing ultrasound agitation equipment and temperature stabilizer for biodiesel.
- Developed and implemented software for visualizing antibiotics molecules and their active groups.

SKILLS and EXPERTISE

Programming Languages: Python, Python3, Perl, C++, Java, Bash, SQL, HTML, CSS, PHP, Javascript

Technical Skills: Security and Risk Assessments, Compliance and Vulnerabilities, Software Review, Log Analysis (ELK Infrastructure), Data Mining, Web-scraping, Molecular Dynamics Simulations, Network Performance Benchmarking, Firmware and BIOS updates, Network Switches, HPC Hardware Tuning, Network Cards (1, 10, 40, 100 Gbps), System Administrator, Linux, Unix, Windows, FreeBSD

Links: github.com/jordancaraballo, [linkedin.com/in/jordancaraballovega](https://www.linkedin.com/in/jordancaraballovega), <http://jordancaraballovega.com>

Significant Research Projects

06/16-Pres., Molecular Dynamics Simulations of pABA Functionalized Cellulose Nanocrystals, PREM

06/17-08/17, Machine Learning Techniques for Security Information and Event Management, NCCS-GSFC

08/16-12/16, Building Cost Effective High Performance 100 Gbps Firewalls, NCCS-GSFC

06/16-08/16, An Automated SCAP Security Tool, NCCS-GSFC

09/14-05/15, Analysis of trends in scientific public publications using Data Mining, PREM

09/13-05/15, Molecular Dynamics Simulation of Electrodes for Capacitors made with Nano-onions, PREM

06/14-07/14, Implementation of New Methods to Decrease Wolffia's Algorithms Time and Calculations, PREM

AWARDS

07/28/17 John Mather Scholarship Awardee

06/26/15 NASA MUREP Scholarship

05/26/15 Bristol Myers Squibb Excellence in Science and Math Scholarship

08/20/14 Partnership for Research and Education in Materials Fellowship