# Renato Adolfo Diaz

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## **EDUCATION**

**University of Central Florida,** Computer Science, B.S. □

NACME Corporate Scholar, SHPE UCF Chapter Member, LEARN Alumni | GPA: 3.4

Aug 2021 - Dec 2024 Orlando, FL

May 2024 - Aug 2024

Chicago, IL

## PROFESSIONAL EXPERIENCE

## **Big Data SWE Research Intern,** Illinois Institute of Technology ☑

• Developed Vault 76, a multithreaded cryptographic hash tool in Rust, suitable for enhancing big data & blockchain proof-of-space (PoS) consensus algorithms.

- Engineered a caching layer to optimize data retrieval processes using an NVMe + HDD solution, reducing data access times for peak load operations by 33%.
- Collaborated with a team of 3 researchers at DataSys Lab to integrate advanced data processing algorithms that improved system efficiency and scalability.
- Executed 10+ benchmarking tests with Bash & Python scripts to document performance gains and pinpoint optimization opportunities in Chameleon.

## **Software Engineer Intern,** *Autodesk* ☑

- Created an automated anomaly detection tool for the CLS team, enhancing the monitoring of over 400 critical licensing services using Java and AWS.
- Implemented 3 unsupervised machine learning detectors and monitors in Kibana to identify & alert on unusual activities every 10 minutes in licensing service logs, minimizing the need for manual oversight from other senior engineers.
- Designed and built Slack integrations for real-time anomaly notifications, improving the team's response times to potential disruptions by 100%.

## **Software Engineer Intern,** *Endpoint* □

- Developed 6 functional unit and integration tests in <u>Python</u> to validate over 12 REST APIs utilized in the Automation Squad's SwaggerHub API platform.
- Contributed to enhancing the <u>CI/CD</u> pipeline by developing *happy path* test cases, significantly reducing manual testing time & allowing 20% of senior engineers on the Automation Squad to prioritize other advanced development tasks.
- Gained proficiency in Agile and Scrum methodologies, participating in daily standups and bi-weekly sprints & retros using Atlassian Jira for task management.
- Mastered version control practices with Git, managing code in the 10,000+ line project repo and collaborating effectively within a distributed team environment.

May 2023 – Aug 2023

San Francisco, CA

Jun 2022 - Sep 2022

El Segundo, CA

# </> TECHNICAL SKILLS

### **Programming Languages**

Python, Java, C/C++, JavaScript, HTML/CSS, Rust

#### **Developer Tools**

Git, Linux, VSCode, Ubuntu, Kibana, Microsoft 365, AWS, Unity, Jira, Azure, MongoDB, Chameleon Cloud

#### **Frameworks**

React, Node.js, Express.js, .NET, Spring, ROS, OpenCV, PyTorch, Django

### Libraries

Pandas, NumPy, Matplotlib, Rayon, BLAKE3