Devon Gardner

github/devon-g | dgardner365@gmail.com | 941-358-1887 | linkedin/devon-gardner

---

EDUCATION
Bachelor of Arts in Computer Science at New College of Florida – 4.0 GPA **Aug 2020 – May 2023**
Honors Thesis – Exploring Robot Kinematics: an Engineering Approach

RELEVANT EXPERIENCE
Red Tide Dashboard **Apr 2022 – May 2022**
- Architected and implemented full-stack web application in Agile/Scrum team of three to produce ReactJS dashboard, aggregating 50,000+ data related to red tide
- Leveraged Twitter, YouTube, and Spotify APIs; built Express and MongoDB backend; deployed app on AWS
- Conducted sentiment analysis on Twitter data using nltk and scikit-learn libraries

EXPERIENCE
New College of Florida – Computer Science Tutor **Feb 2023 – Present**
- Troubleshoots student projects and provides strategic direction; has achieved 100% student satisfaction rating

New College of Florida – Teaching Assistant **Aug 2022 – Dec 2022**
- Taught students computer architecture concepts in small group format over 30+ office hour sessions; graded 100+ project submissions; handled integrity violations; improved course teaching materials; oversaw workshops

UofSC Center for Computational Robotics – Research Assistant **May 2021 – Aug 2021**
- Produced training dataset of underwater cave structures for robotic cave diving computer vision project
- Wrote Python script to ensure dataset quality by automating correction and culling of class labels
- Trained proof of concept YOLOv5 object detection model to classify structures with 82% mean average precision

State College of Florida – Supplemental Instruction Specialist **Oct 2019 – Aug 2023**
- Demonstrates application of programming concepts to tutees; teaches Python, Java, and C++ syntax
- Synthesizes concepts from Mathematics, Physics, and Chemistry; identifies student weaknesses; guides students through problem solving process

PROJECTS
Rusterizer **Feb 2023 – Apr 2023**
- Built computer graphics rasterization library to render user-defined 3D scenes using Rust
- Generated 2D images from object models using linear transformations and interpolation

WidowX 200 Robot Arm Control Architecture **Aug 2022 – May 2023**
- Applied linear regression to produce Gaussian mixture model-based motion primitives
- Evaluated performance of 5 motion primitives using root mean square error
- Utilized forward and inverse kinematics to convert between 3D coordinates and joint angles
- Communicated with robot arm through custom C++ DynamixelSDK wrapper and ROS2 framework

From Nand to Tetris **Jun 2022 – Jul 2022**
- Built 16-bit Hack CPU and RAM from ground up using only NAND logic gates
- Designed and created logic gates and functional 16-bit Arithmetic Logic Unit in Minecraft
- Implemented assembler capable of supporting symbols and labels to generate machine language

RELATED COURSES & SKILLS
Courses: Software Engineering, Object Oriented Design, Machine Learning, Computer Architecture, Embedded Systems
Languages: C++, C, Python, Java, Rust, TypeScript, JavaScript, C#
Technologies: Git, Linux OS, Vim, Docker, GDB, radare2, Arduino, Agile/SCRUM, ReactJS, ROS