

Devon Gardner

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Education

New College of Florida – BA in Computer Science

May 2023

Skills

Programming: Python, TypeScript, JavaScript, Bash, C++, C, Java, Rust

Technologies: AWS, Docker, ReactJS, Git, Linux, Nix, Agile/SCRUM, Neovim, GDB, Arduino, ROS

Experience

Research Assistant, UofSC Center for Computational Robotics – Columbia, SC 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

Computer Science Tutor, New College of Florida – Sarasota, FL Feb 2023 – May 2023

- Troubleshoots student projects and provides strategic direction; has achieved 100% student satisfaction rating

Teaching Assistant, New College of Florida – Sarasota, FL 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

Supplemental Instruction Specialist, State College of Florida – Bradenton, FL Oct 2019 – Aug 2023

- Demonstrated application of programming concepts to tutees; taught Python, Java, and C++ syntax
- Synthesized concepts from Mathematics, Physics, and Chemistry; identifies student weaknesses; guides students through problem solving process

Service Porter, Jaguar Land Rover of Sarasota – Sarasota, FL Aug 2023 – Present

- Receive customers and guide them to the correct department
- Transport customers and vehicles to and from residences and service drive
- Collect and distribute loaner vehicles through digital contracts

Projects

Red Tide Dashboard

- 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 REST APIs through Express and MongoDB backend hosted on AWS
- Conducted sentiment analysis on Twitter data using nltk and scikit-learn libraries

WidowX 200 Robot Arm Control Architecture github.com/devon-g/robot-kinematics

- 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

Neovim github.com/neovim/neovim

- Identifies and investigates high impact C code defects using Coverity Scan platform
- Collaborates with other maintainers of the project through Github pull requests ensuring quality of fixes
- Creates clean and concise git history through a git rebase workflow