RAMSEY DAOU

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TECHNICAL SKILLS

- Programming Languages: C, C++, C#, Python
- Software Development Tools: Azure DevOps, Git, Perforce, Unity

WORK EXPERIENCE

SOFTWARE ENGINEER, R&D Sept 2019 – Present

National Instruments, Austin, TX

- Extend functionality of 15-year-old 2 million-line C++ codebase in an Agile environment, maintaining customer compatibility while improving code readability, reusability, and ease of testing.
- Research and refine new features for data-acquisition hardware drivers to support new communication standard, integrating features with existing software application suite.
- Increased test coverage by developing 100+ unit and system-level tests using Google Test infrastructure, discovering and fixing several dozen bugs with new and legacy code paths.
- Partook in working group to enforce new guidelines on authoring and organizing tests, significantly reducing overhead associated with searching for and fixing faulty and complex tests.

TEACHING ASSISTANT, 'COMPUTING FOR ENGINEERS' Aug 2017 – May 2018

University of Houston, Main Campus

- Worked with professors to create an Arduino-based 'Simon Says' game using MATLAB to introduce freshman students to key concepts of electrical engineering.

EDUCATION

The University of Houston May 2019

Bachelor of Science Degree in Computer Engineering GPA: 3.9

Relevant Courses: Data Structures, Advanced Microprocessors, Intro to Machine Learning

PROJECTS

For images and more information on my projects, visit my website at: https://ramseydaou.github.io/

Unity Coding Projects

- *Flocking Simulation:* Programmed objects to move together based on bird/fish flocking behaviors.
- *Procedurally Generated World:* Implemented Perlin Noise Algorithm to create a grid world generation tool with realistic topography (hills, shores, rivers).
- *Vision and Navigation:* Utilized Dijkstra's algorithm for pathfinding and developed an algorithm to calculate field of vision in grid world.

Mobile Robotic Videographer

- Collaborated with 3 peers to design a prototype wheeled robot capable of tracking and filming a runner safely at speeds up to 15 miles per hour for 60+ minutes as part of a $600,000 research grant.
- Implemented machine learning to detect a runner within the video frame and estimate their distance.
- Designed a control system to track the runner and navigate through GPS waypoints using Python.

NASA Community College Aerospace Scholars

- Cooperated with 10 scholars to build a model rover, taking role of Lead Software Engineer.
- Presented and pitched rover design to 6 NASA employees, focusing on flexible and reliable design.