Aidan Roig

Software Engineer

Flagstaff, AZ 86004 | (928) 606-1732 | aroig@arizona.edu | linkedin.com/in/aidan-javier-roig/

Work Experience

Software Developer Intern *05/2023 to 07/2023*
Zoot Enterprises – Bozeman, MT

- Assisted in development of company projects with the Core Software Integration (CSI) team which focuses on the backend and cybersecurity of Zoot's automated financial decision software.
- Ensured security of consumer data through the development of file encryption and decryption **Python** software.
- Created and worked with configuration files of type **YAML** and **JSON** to improve script configurability.
- Automated the creation of excel document reports to store and summarize thousands of input client data.
- Practiced version control using **Bitbucket** and **Git**.
- Deployed updated scripts to **Linux** hosts using **Jenkins** and **Ansible**.

Projects

Tanks Game

- 2D tanks game programmed in **Python**. The player destroys CPU enemy tanks with varying abilities across 9 different levels. CPU tanks use the **A* pathfinding algorithm** to move. Each level was loaded through a **JSON** file.

FPGA based Pipelined Datapath with Searching Algorithm

- Designed, implemented, and validated a **five-stage pipelined datapath** for the **MIPS 32-bit ISA** on an **FPGA**. Implemented an **image processing algorithm** in MIPS that was executed on the FPGA's pipelined processor emulation.

Tic-Tac-Toe

- **Python** game created to be played against an AI with easy, hard, and ChatGPT modes using a **Tkinter GUI** for the user to interact with. It uses **OpenAI's API** to interact with ChatGPT's true AI.

Vehicle Position Simulator

- Output the changing position and state of a moving vehicle given a file with several sets of direction and velocity inputs programmed using **C++.**

Education

Bachelor of Science: Software Engineering *Expected in 05/2025*
University of Arizona – Tucson, AZ

- 3.94 GPA
- Dean's List [Fall 2021 – Spring 2023]
- Wildcat Distinction Scholarship Recipient

Important Links

ePortfolio:
aroig1.github.io/Personal-Website/
GitHub:
github.com/aroig1

Skills

Programming Languages

- C, C++
- Python
- Java
- MIPS assembly language
- HTML
- CSS
- JavaScript

Tools

- Visual Studio Code
- Linux
- Conda
- Jenkins
- Ansible
- Git
- Bitbucket
- SolidWorks
- Microsoft Excel

Concepts

- Object-Oriented Programming (OOP)
- Unified Modeling Language (UML)
- Agile Methodology

Relevant Coursework

- Data Structures and Algorithms
- Fundamentals of Computer Organization
- Discrete Mathematics
- Computer Programming Engineering Applications
- Digital Logic
- Intro to Software Engineering
- Object Oriented Modeling and Design