Tristen Michael Gesler

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EDUCATION

Florida State University — Tallahassee, FL
Bachelor of Science, Computer Engineering — April 2022
GPA: 3.48

SKILLS & ABILITIES

Programming Languages:
C, C++, Python, Verilog, MATLAB, Dart, VHDL
Hardware Platforms:
Arduino ESP32, TI MSP430, Intel Cyclone V FPGA
Tools:
Linux, Git, Quartus, ModelSim, Ngspice, Magic VLSI, LaTeX

PROJECTS

Arko - Navigation for Seniors *Dart, C*
github.com/tmg931/Arko

- App to help senior citizens with cognitive impairments navigate home from a walk or to any location.
- App developed for Android devices using **Dart** with **Google Maps API** for the navigation.
- Secondary device containing an **Arduino Microcontroller** developed using **C** that pulls up the navigation screen with the press of a button.
- Served as the Lead Software Engineer in a team environment over a multi-month development cycle.

SAR Analog-to-Digital Converter *Verilog, Magic, SPICE, xschem*
github.com/tmg931/SARADC

- Successive-Approximation Digital-to-Analog converter developed for the Skywater 130nm **ASIC** Architecture.
- SAR component written using **Verilog**, various other components created using **Magic VLSI**, design simulated using **SPICE**.
- Worked in a team that used various tools to create components of the ADC.

Gridworld Machine Learning AI *MATLAB*
github.com/tmg931/GridworldAI

- AI, written in **MATLAB**, that utilizes a **Q-learning** algorithm to explore an unknown space then maximize score.

- Utilizes an epsilon-greedy algorithm in the exploring phase to find the best exit.

MIF Generator and Displayer *Verilog, Python*
github.com/tmg931/MIF

- Generates a Memory Initialization File (MIF) from a JPG using **Python**.
- Displays the MIF using a FPGA onto a monitor with **Verilog**.