

# ARTURO SALINAS

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## EDUCATION

**University of Connecticut** Storrs, CT  
*Bachelor of Science in Computer Engineering* 2023 - 2026 (expected)  
• GPA: 4.0

## EXPERIENCE

**NIUVT | Signal Processing Engineer** June 2024 - December 2024 (*expected*)  
• Undergraduate Research assistant for National Institute for Undersea Vehicle Technology.  
• Multiplexed signals from various digital Human Monitoring devices.  
• Reverse engineered Bluetooth HLE signal processing algorithms for integration into the monitoring system.  
• Implemented advanced signal processing algorithms in MATLAB, and Python including ECG R-peak detection, HRV analysis, and respiratory rate estimation.  
• Created a comprehensive human factors monitoring system for submarine training environments, integrating multiple physiological signals.  
• Designed and implemented data fusion algorithms to provide holistic crew health status from multiple sensor inputs.

**United States Navy | Nuclear Electronics Technician** March 2017 - July 2023  
• Performed maintenance and repairs on electronic systems essential for nuclear reactor operations, including calibration and troubleshooting of reactor control rods.  
• Successfully planned and executed critical repairs on crucial electrical distribution equipment, ensuring mission success.

**United States Navy | Nuclear Reactor Operator** March 2017 - July 2023  
• Operated and maintained Nuclear Reactor and controlled throttles.  
• Extensive training in high stress casualty conditions.  
• Compiled and conducted nuclear training for Engineering Department of a Nuclear Submarine.

## PROJECTS

**FPGA Digital Design and Driver Development**  
*Utilized FPGAs from Lattice and Cologne Chip to develop digital design skills, including look-up tables, driver development, and signal processing*

**StarFive VisionFive2 SBC Development**  
*Leveraged the StarFive VisionFive2 SBC to work with RISC-V 64-bit ISA, compiler design, and low-level system architecture development*

**Hardware EEPROM Unlock and Firmware Flashing**  
*Performed hardware hacking, EEPROM manipulation, and custom firmware development using I2C, UART, and JTAG protocols for embedded systems*

**i386 Architecture and VME Bus Circuit Board Troubleshooting**  
*Executed signal tracing and troubleshooting using electronic test equipment; focused on both digital and analog signals in i386 architecture and VME bus systems*

## SKILLS

**Systems Engineering:** UNIX, Embedded systems, Parallel Processing, Docker  
**Programming:** Github, Visual Studio, Powershell, VIM  
Verilog, VHDL, Python, C, MATLAB, lua, Bash, RISC-V Assembly  
Vimscript, L<sup>A</sup>T<sub>E</sub>X  
**Interests:** CPU/GPU Microarchitecture, VLSI, Aestheticism,  
ASIC Verification and Design, Hardware Verification  
Innovation, Cybersecurity (Hacking), and Data Management.