

Stanley Barnes

Knoxville, TN

wstanleyb@gmail.com • wstanleyb.com

EDUCATION

The University of Tennessee Knoxville

Graduation May 2027

Bachelor of Science in Computer Engineering

GPA: 3.92

PROJECTS

Teachable Things

- Low-power handheld edge AI platform that lets users build, train, and deploy custom models on device
- Designed custom battery management, USB-C compliant interface, and touchscreen and camera interfaces
- Adapted driver code for LCD, touchscreen driver, camera, and SD card for custom framework

Smokey Buoy

- Low-cost, energy-efficient, fully autonomous buoy that monitors water pollutants including nitrates, phosphates, heavy metals, and industrial contaminants
- Created solar harvesting board to maximize energy capture to power microcontroller and charge battery for night time use

Sonoco Paint Can Defect – Senior Project

- Performed root cause analysis on an active production line to reduce paint defects during manufacturing
- Integrated AI cameras to detect faults before they happened to reduce cost of lost product.

EXPERIENCE

Research Assistant – EPIC Lab

May 2025 – Present

- Co-author, “Water is Life: Toward Open Infrastructures for Water Security Partnership,” *Conference on Human Factors in Computing Systems*, under review, August 2026
- Co-author, “Teachable Things: Interactive Machine Learning on Tiny Devices,” *Symposium on User Interface Software and Technology*, under review, June 2026
- Created custom microcontroller platforms for edge AI applications

Teaching Assistant – COSC 559, Human-Computer Interaction

August 2026 – December 2026

- Run weekly lab sections for 30 graduate students and graded programming assignments.

SKILLS

Hardware

KiCad, Cadence Virtuoso, Verilog, Xilinx FPGA, ARM, Fusion 360, LTspice, Keysight ADS

Software

C, C++, Python, Java, Linux, Git, MATLAB

Lab Equipment

Oscilloscope, Waveform Generator, Logic Analyzer, Spectrum Analyzer