

# Zachary W. Walden

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## 1 Skills

### 1.1 Programming

- Application: C/C++, Python, Java
- Embedded: C, Assembly (AVR)
- HDL: Verilog, CocoTB
- Other: MATLAB, Simulink, CMSIS RTOS RTX, Qt (Python & C++), Git, GDB(-Peda)

### 1.2 CAD

- Circuits: Kicad (Schematic Capture, PCB Layout & Routing with concern for S.I. & E.M.C), Cadence PSpice (simulation)
- IDEs: Visual Studio, VSCode, Microchip Studio, ARM Dev. Studio, Keil uVision, Eclipse, Android Studio, STM32Cube
- Other: Visual Paradigm (UML, SYSML)

### 1.3 Prototyping & Debug

- Debug: Benchtop Digital Oscilloscopes, Analog Discovery 2
- Prototyping: Breadboards, Soldering (SMD & THT, Iron & Hot Air. QFP, SSOP, SOIC, etc. packages).

## 2 Education

### 2.1 Oklahoma Christian University

Bachelor of Science, Computer Engineering Aug 2018 - April 2022, GPA 4.0

### 2.2 Spring 2022

- ELEC-3523 Digital Signal Processing
- CENG-4303 HDL Design of Microprocessors
- CENG-4753 Systems Design III

### 2.3 Fall 2021

- ELEC-4523 Software Engineering of Real-Time Systems
- CENG-4113 Software and Network Engineering
- CENG-4743 Systems Design II

## **2.4 Spring 2021**

- CENG-3213 Computer Systems
- CENG-4223 Embedded Systems Design
- CENG-4213 Network Engineering
- ELEC-3313 Electronic Devices
- CMSC-4413 Operating Systems
- CENG-4732 Systems Design I

## **2.5 Fall 2020**

- CENG-3203 Intro to Microprocessors
- ELEC-3504 Signals and Systems
- ELEC-3303 Analog Electronics

## **2.6 Spring 2020**

- ENGR-2614 Electrical Circuit Analysis
- ENGR-2123 ECE Mathematics II

## **2.7 Fall 2019**

- ENGR-2544 Introductory Digital Systems Design
- CMSC-2133 Object Oriented Programming

## **2.8 Spring 2019**

- ENGR-2113 ECE Mathematics I
- ENGR-1242 Engineering Fundamentals
- CMSC-1123 Programming II

## **2.9 Fall 2018**

- CMSC-1113 Programming I
- ENGR-1122 Engineering Computing

## **3 Experience**

**3.1 Teaching Assistant, Oklahoma Christian University (Jan. 20 - Mar. 20, Aug. 21 - Nov. 21, Jan. 22 - Apr. 22)**

**3.2 (Dec. 20 - Jan. 21, Jun. 21)**

**3.3 VisuALS Technology LLC. (May 2019 - Aug. 2019)**

## **4 Projects**

**4.1 8-bit 5-stage Pipeline RISC CPU**

**4.2 DC/DC Boost Converter**

**4.3 RGB Laser Scanner Controller**