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MATTHEW WEI

EDUCATION

University of Illinois at Urbana-Champaign   Expected Graduation: May 2024

Electrical Engineering Major and Computer Science Minor

Champaign, IL

GPA: 3.78/4.00

Relevant Coursework: Analog Signal Processing, Computer Systems and Programming, Fields and Waves, Thermodynamics, Discrete Structures, Differential Equations, Multivariable Calculus, Linear Algebra

Clubs: Triangle Fraternity, IEEE, Asian American Association

WORK EXPERIENCE

U.S. Army Construction Engineering Research Laboratory   June 2021 – August 2021

Research Intern   Champaign, IL

- Accelerated development of water-treatment project by incorporating electrical devices such as methane sensors, solenoids, and pH detectors onto system's infrastructure
- Designed and implemented plumbing routes on system to work with a PLC controls unit, increasing runtime efficiency up to 12%
- Team player and worked with 12-member team on lab demonstration, leading subsections tasks, and reporting project progress weekly

Diteq   August 2019 – December 2019

Freelancer   Lenexa, KS

- Pioneered and integrated new product management method through cycle counting to warehouses for improved inventory accuracy
- Analyzed and evaluated statistics of multiple companies over both benefits and drawbacks of cycle counting

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PROJECTS

AM Radio Receiver

- Constructed analog superheterodyne receiver with circuit schematics utilizing op-amps, envelope detectors, and bandpass filters
- Operated signal generators, oscilloscopes, and spectrum analyzers for design verification

Vending Machine Coin Sensor

- Assembled and developed circuit through backend VLSI hardware design that distinguishes USD coins and calculates appropriate change
- Digital circuit simulation and validation done with Altera Quartus for SOPC testing

Light Seeking Car

- Built an automated car that locates and targets high lumen concentrations
- Utilized and incorporated silicon semiconductor components such as photodiodes and MOSFETs

Coffee Heat Sensor

- Designed a product which notifies users and detects if a coffee mug is warm through contact
- Diagnosed and troubleshooted faulty circuit designs through circuit and schematic analysis with datasheets

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SKILLS

- C/C++, Python, Git, HTML, CSS, Java, Linux, Assembly, LC3, JavaScript, Perl, SQL, LD