Skyler Lang

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EDUCATION

B.S., Computer Engineering | University of Illinois at Urbana-Champaign   2023-2027
High School Diploma | Taipei Fuhsing Private School, Taiwan   2019-2023

TECHNICAL SKILLS

Programming Skills: Java, Python, C++, C, LC3 Assembly Code, JavaScript, HTML, CSS
Tools: KiCad, GitHub, CLI, Microsoft Excel, FastX, NumPy
Language Proficiency: Fluent in English and Mandarin Chinese
Hobbies: Online Education Creation, Blogging, Music Production, Triathlon, Basketball, Reading

EXPERIENCES

Electrical Engineer | Illini Solar Car   2023-2024
- Designed and implemented an enhanced PCB for the Calypso solar car's braking system, achieving a 30% increase in detection speed and a 25% boost in braking efficiency by integrating a new string potentiometer sensor
- Led the soldering and integration of key electrical components, including the battery management system and brake sensor, while motivating the team to meet crucial deadlines and adhere to safety standards

Software and Hardware Engineer | FIRST Robotics Competition   2020-2022
- Programmed the robot's autonomous mode to accurately shoot balls into target holes during the 30-second autonomous phase of the tournament, precisely calibrating motor movements for optimal navigation and scoring
- Enhanced the robot's durability by personally reinforcing it to withstand collisions in a 3-on-3 competition, ensuring consistent performance through critical motor repairs and modifications for robust match endurance

PROJECTS

Clipped Voltage Signal Generator
- Engineered a versatile signal generator circuit using components like the 555 Timer, LM358 Integrator, BJT Clipper, and Op-Amp Amplifier to produce precise clipped and filtered voltage signals with adjustable amplitude and frequency
- Optimized circuit performance and stability through comprehensive testing with oscilloscopes and signal generators, ensuring reliable signal integrity and honing skills relevant to hardware and systems engineering roles

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- Developed a fully responsive portfolio website using HTML, focusing on modern user interface design principles to enhance user experience across devices and improve search engine optimization for better visibility
- Integrated interactive elements and performance optimizations, such as smooth scrolling and dynamic content, to ensure fast load times and a polished user interface, strengthening skills in front-end web development

LEADERSHIP EXPERIENCES

Co-Founder and Vice President, Byte Sized Coders   2018-2023
- Designed and delivered a comprehensive year-long coding curriculum covering AP Computer Science A content, leveraging online learning platforms like Moodle to effectively instruct and inspire a class of 30 students

Lead Programming Instructor, Voluntutor Cloud   2020-2023
- Traveled to remote areas to teach IT and programming, creatively introducing Scratch and Python to 3rd to 7th graders from underprivileged backgrounds. Used relatable analogies, such toy boxes and action figures, to simplify concepts like Object-Oriented Programming and engage students in interactive learning
- Led a team of 5 to instruct a class of 40 students, adapting lessons to meet diverse learning needs while fostering an engaging and inclusive atmosphere that encouraged students to explore coding and problem-solving