Sigmond Kukla

Entrepreneur, Researcher, and Problem-Solver | Electrical, Computer, and Software Engineering Student at Clarkson University

Pittsburgh, PA (412) 287-0463 sigkukla@gmail.com https://sigmondkukla.dev linkedin.com/in/sigmondkukla github.com/sigmondkukla

Skills

Programming Proficiency

C, C++, Python, VHDL, Verilog, STM32, CMSIS, Assembly, MATLAB, Microsoft Excel, React Native, Vue.js, C#, OpenCV, TensorFlow Lite

Software Proficiency

Altium Designer, KiCad, ARM Keil, AMD Vivado, Silicon Labs Simplicity Studio, SOLIDWORKS, Autodesk Fusion, Git, VS Code, Visual Studio, Unity, Blender, Proxmox, Docker

Experience

Clarkson University — June 2024 - Present
Undergraduate Research Assistant - Center for Advanced PCB Design and Manufacturing — Potsdam, NY

- Lead interdisciplinary collaboration with Chemical Engineering to develop portable electrochemical sensors
- Responsible for implementing measurement and data collection from a Texas Instruments LMP91000 potentiostat using the Silicon Labs EFR32MG24 microcontroller with a BLE mobile app interface
- Lead design and executed development of GaitSIT: a VR app for assessing walking gait and quantifying related issues
- Won 5th place in a Sierra Circuits PCB design competition for building an on-board AI-enabled wearable bandage maternal biosensor.

Clarkson University — January 2025 - Present
Teaching Assistant - EE260 Embedded Systems — Potsdam, NY

- Responsible for modernizing Embedded Systems curriculum to target Silicon Labs EFR32XG24 Wireless and ML microcontroller, including creating lecture presentations and labs.
- Assist students with theoretical and hands-on aspects of the curriculum, as well as delivering approachable and engaging lectures.

Clarkson Ignite — August 2024 - Present
Maker Mentor — Potsdam, NY

- Facilitated innovation in the Ignite Dorf Makerspace, ensuring safety and helping students transform their ideas into tangible products
- Lead workshops to promote awareness of Makerspace resources, utilizing both public speaking and individual tutoring skills
- Spearheaded projects including custom digital signage and embedded systems solutions for 3D print pickup lockers

PicoPlanet Developing — Nov 2017 - Present
Small Business Owner — Pittsburgh, PA
https://picoplanetdev.tk

- Self-taught Virtual Reality game development with multiple paid games published on the Meta Quest platform

Simcoach Games — June 2023 - July 2023
Summer Apprentice — Pittsburgh, PA
https://www.simcoachapprenticeship.com/

- Worked in small teams on two self-directed transformational games aimed at children with autism/other neurodivergent disorders
- Built—and helped peers to build—game development skills including Unity, C#, Maya, and Blender

Absolute Value Tutoring — May 2023 - August 2024
Curriculum Designer and Teacher — Mt. Lebanon, PA

- Created and taught programming courses for elementary and middle school students, using teaching and communication skills
- Managed two Introduction to Python courses plus an Introduction to Arduino and Computer Engineering week-long class

Education

Clarkson University — May 2028
Electrical, Computer, and Software Engineering — Bachelor of Science
4.0 GPA

Ignite Presidential Fellow with sophomore academic standing in the Honors program

Mount Lebanon High School — June 2024
4.0 GPA / 5.2 weighted

10 AP classes including one self-studied, and 3 Independent Study project courses in senior year after finishing all available curriculum

Projects

Ignite Pickup Boxes — September - December 2024

3D print pickup lockers for Clarkson's Dorf Makerspace, build using off-the-shelf hardware and custom open-source software. Won 1st place out of nearly 100 teams at the Ignite Project Expo.

AssemBLOCKS — January - November 2024

Educational VR game teaching assembly with a simulated 6502 microprocessor. Presented at Associated Colleges of the St. Lawrence Valley *VR in Teaching and Research* Faculty Seminar.