

**Kyle Verwey**

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[GitHub](#) | [LinkedIn](#) | [Portfolio](#)

## Profile

Self-taught software developer seeking to leverage skills in the software space. Highly motivated team player adept at solving problems under pressure and communicating technical concepts clearly.

## Key Skills

- Programming Languages: C, C++, Python

## Projects

### LED/Magnetic Reed Switch Chess Board

Developed an innovative chess board that integrates software with hardware using 4 8x32 LED matrices and dual ESP32 microcontrollers. This project showcases my ability to tackle complex technical challenges, such as:

- **Memory Optimization:** Transitioned from Arduino to ESP32 to handle the demands of controlling 1024 LEDs and 64 magnetic reed switches, overcoming significant memory limitations.
- **Data Management:** Implemented a custom function for LED control using X, Y coordinates, enabling efficient manipulation of the LED grid.
- **User Interaction:** Designed an interface that allows the board to provide real-time feedback on possible piece movements, facilitating an engaging physical chess experience.

### Game Bot

Created a sophisticated pixel-finding tool for automating interactions within a gaming environment, featuring:

- **Object Tracking:** Developed a system that identifies and tracks on-screen objects based on RGB values, significantly improving gameplay efficiency.
- **Performance Optimization:** Refined the RGB detection algorithm to minimize processing time, avoiding full-screen scans while ensuring accurate results.
- **Automation Features:** Programmed mouse movements and actions (right-click, left-click, drag) based on detected object locations, enhancing user experience and gameplay strategy.

**Education - Google Analytics Certificate** | January 2023 | [View Certificate](#)