Benjamin Thaik

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Education

University of Illinois - Urbana Champaign — Champaign, IL
Bachelor of Electrical Engineering, Minor in Semiconductor Engineering — *Aug. 2023– May 2027*
GPA: 3.58/4.0

Experience

Illini Solar Car Microsystem and High Voltage Member — August 2023 – Present
University of Illinois Urbana Champaign — *Urbana, IL*

- Diagnosed and resolved issues in the Motor Control Controller, improving system stability and performance.
- Conducted comprehensive battery testing for car's battery packs to ensure that they don't short or undervolt.
- Soldered and re-soldered battery packs, battery pads, and PCB boards to maintain circuit functionality.
- Redesigned the Power Distribution Control PCB board to enhance circuit efficiency and reduce manufacturing complexity.
- Performed programmable load and transient tests on DC-DC converters to validate power delivery.

Illini Solar Car Webmaster — April 2024 – Present
University of Illinois Urbana Champaign — *Urbana, IL*

- Managing and editing content on Illini Solar Car's website (illinisolarcar.com) using HTML/CSS, enhancing user experience and providing essential information for new recruits and potential sponsors.
- Maintaining and organizing the Illini Solar Car wiki (wiki.illinisolarcar.com), which served as the primary archive for team meetings and project documentation, using PHP and MediaWiki.
- Oversee and administer the remote workstation for the mechanical subteam's CAD work via DigitalOcean (remote desktop) and Secure Shell (SSH) to ensure reliable and secure access.
- Assisting new members with hardware and firmware on-boarding projects. Providing incoming members with access to the team wiki and remote workstation.

Outlier Senior Writer — May 2024 – August 2024
Software Engineering Job — *San Francisco, CA*

- Assessed and refined Meta AI-created content to ensure it was clear, accurate, and met project objectives, providing constructive feedback to enhance overall quality.
- Developed content using Meta AI tools, tailoring it based on feedback and revisions to match project requirements and improve overall quality.
- Wrote and refined Python and C++ code to generate Meta AI responses based on human-created questions, ensuring that Meta AI's outputs were accurate and aligned with the intended context.

Projects

Arduino Automated Gate | *Arduino C++* — April 2024 – June 2024

- Developed a machine that would open and close a gate when the system detects an emergency vehicle or when a QR code was scanned.
- Crafted a function Automated Gate System with an ultrasonic sensor, motor, sound sensor, digital display.
- Programmed in Arduino C++ for the back end of the Automated Gate System.

YouTube Channel Scraper | *Python, Google Cloud* — June 2024 – August 2024

- Created a program that would web scrape the inputted YouTube Channels' Most Recent video.
- Utilized YouTube Data API V3 in Google cloud to provide the given YouTube Channel's Data.
- Developed functioning YouTube URLs to help users bypass recommended videos, promoting focused viewing and reducing distractions on the platform.

Technical Skills

Languages: C, C++, Arduino C++, CSS, LC3, Python, PHP
Developer Tools: CLion, Duda, Git, KiCad, Google Cloud Storage, KiCad, MCUExpresso, MediaWiki, PyCharm, CLion, Prohelion, MediaWiki, Remote Desktop, Secure Shell, Duda
Libraries: googleapiclient.discovery, NumPy, Matplotlib, NumPy, googleapiclient.discovery, pytube, Selenium
Relevant Coursework: Introduction to Electronics, Introduction to Computing, Computer Systems and Programming, Linear Algebra with Computational Applications