

# Christopher William Gottwaldt

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## EDUCATION

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### University of Wisconsin - Madison

Madison, WI

*Bachelor of Science Computer Sciences, Bachelor of Science Data Science*

*Expected December 2024*

- Algorithms, Data Structures, Artificial Intelligence/Machine Learning, Computer Vision, and Data Modeling.
- Machine Organization and C Programming, Object-Oriented Programming, Intro to Computer Engineering.
- Project Coordinator for the Undergraduate Projects Lab, and Programmer for Wisconsin Robotics.

## EXPERIENCE

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### Embedded Software Engineering Co-op Intern | *Python, Bash, TTL*

May 2023 – January 2024

*Extreme Engineering Solutions, Inc.*

*Verona, WI*

- Develop command line tools and scripts using Python and Bash to automate tasks, increasing workflow efficiency.
- Develop object-oriented Python programs to patch firmware files and display product information via API calls.
- Configure Linux operating system images using BOB configurations that create standardized environments which incorporate and run code from a plethora of teams to verify product function.
- Collaboratively create test procedures by utilizing a blend of software and hardware skills under the Agile framework to ensure the functionality of single board computers for our customers.
- Gain experience tracing signals along schematics, soldering, testing voltagepoints, and navigating PCB layouts.

### Student Web Developer | *React, Node.js, MySQL*

October 2022 – Present

*UW-Madison Department of Information Technology*

*Madison, WI*

- Create and implement front and back end solutions to launch a new website for UW-Madison's IT team.
- Identify issues or potential new features for the website and address them in a timely manner.
- Collaborate with other developers using GitLab to address project issues and create merge requests.

### Level 2 Analyst

November 2021 – Present

*UW-Madison Department of Information Technology*

*Madison, WI*

- Provide advanced technical troubleshooting to VIP University employees to find high-quality technology solutions.
- Operate and support services, software, and devices with sensitive information as an administrator.

### Help Desk Phone Agent

August 2021 – November 2021

*UW-Madison Department of Information Technology*

*Madison, WI*

- Assisted students with technology problems, registered devices, and alerted customers of security issues.

## PROJECTS

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### Panorama Photo App

- Created an application that combines 3 or more overlapping landscape images together into one resulting image.
- Finds key points in the images using the SIFT algorithm, warps the sides of the image, and combines them using the key points: SIFT Algorithm Wikipedia Page.
- This project and more information on it can be found on this site: Panorama Project Site.

### Object Tracking

- Created a object-tracking model that can follow a moving object throughout a video.
- Tracks an object using the histogram-based tracking method and draws a box around the object when it's identified for every frame of the video.
- This project and more information on it can be found on my presentation site here: Object Tracking Site.

## TECHNICAL SKILLS

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**Languages:** Python, C, React, R, Java, Bash, MATLAB, JavaScript, SQL, HTML, CSS, TeraTerm Language.

**Developer Tools:** VS Code, Vim, Git, GitLab, MySQL Workbench, Excel, ROS, Google Cloud Platform.

**Libraries:** PyTorch, NumPy, Node.js, Blueprint.js, Matplotlib, Pandas, Selenium, Tidyverse, Ggplot2, Dplyr.

## AWARDS

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Eagle Scout, Fridley American Legion Academic Scholarship, AP Scholar, 3 Science Olympiad Medals.