Christopher William Gottwaldt

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EDUCATION

University of Wisconsin - Madison — Madison, WI
Bachelor of Science Computer Sciences, Bachelor of Science Data Science — *Expected December 2024*
- Operating Systems, Algorithms, Data Structures, Artificial Intelligence/Machine Learning, and Computer Vision.
- Machine Organization and C Programming, Object-Oriented Programming, and Intro to Computer Engineering.
- Data Modeling I and II, Discrete Math, Linear Algebra, Statistics for Engineers, and Excel for Analysis.
- Project Coordinator for the Undergraduate Projects Lab, and Programmer for Wisconsin Robotics.

EXPERIENCE

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 to 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 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.
- Add functionality and fix bugs to the site to better enable our IT department's scheduling needs.
- 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 account security issues.

PROJECTS

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, applies a linear transformation to the sides of the image, and combines them together into a panorama using the detected key points to ensure proper alignment.
- This project and more information on it can be found here: Panorama Project Site.

Object Tracking
- Created a object-tracking model that can follow a moving object frame-by-frame throughout a video.
- Used the histogram-based tracking method to detect an object and draw a box around it for each frame of a video.
- This project and more information on it can be found here: Object Tracking Site.

TECHNICAL SKILLS

Languages: Python, C, React, R, Java, Bash, MATLAB, JavaScript, SQL, HTML, CSS, TeraTerm Language.
Developer Tools: VS Code, Vim, Git, GitLab, SSH, MySQL Workbench, Excel, React Native, ROS.
Libraries: PyTorch, NumPy, Node.js, Blueprint.js, Matplotlib, Pandas, Selenium, Tidyverse, Ggplot2, Dplyr.

AWARDS

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