

Bucky Blaireau

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Education

University of Wisconsin - Madison

Expected May 2025

B.S. Double Major in Computer Science and Computer Engineering, GPA: 3.9

Experience

Baird

May 2024 - Present

Software Engineer Intern

Madison, WI

- Created a console app that interfaced with an external API to obtain, parse, and upload client data to a database, handling hundreds of records daily
- Updated applications to remove dependencies on outside services and handle previously abstracted business logic
- Created a proof-of-concept Blazor WebAssembly app to explore the benefits of switching to Blazor from Angular
- Performed .NET and Node.js updates as part of app lifecycles
- Assisted Business Analysts in research and discovery for future work items

Library of Congress

January 2024 – May 2024

Quality Assurance Specialist Intern

Washington, DC

- Developed and maintained end-to-end regression tests for 2 Congress.gov applications
- Wrote 55+ automated tests for one app, resulting in 75% code coverage
- Updated and refined tests for another application that tested the site's entire workflow
- Reported bugs discovered in testing to developers and worked with them to prioritize test creation for important features

Open Systems International

May 2022 – August 2022

Software Engineer Intern

Medina, MN

- Created an Angular-based web application that configured downstream applications based on client preferences
- Completed base functionality of app and began to add plugin support before end of internship
- Gained experience with Agile scrum practices, refining app features based on input from experienced engineers

Projects

Cricket Pulse | Python, SQL

- Python app that charts play-by-play data of the Indian Premier League up to 2017
- Able to do a side-by-side comparison of players or teams, and add user notes tied to an individual player/team
- Users could query the database for players, teams, or matches using a variety of filters depending on search type
- Created and normalized our own relational model and cleaned the corresponding dataset

Digital Segway Circuit | Verilog, SystemVerilog

- Created a fully custom controller for a Segway
- Communicated with motors, speakers, accelerometers, gyroscopes, and other I/O streams using SPI, I2C, and UART
- Tested using ModelSim as well as on hardware using FPGAs

Meteor Game | C

- Wrote firmware for the TI-MSP432 board using FreeRTOS
- Designed PCB and firmware to implement a simple timer, connected to MSP432 using I2C
- Created an arcade game using the screen, accelerometer, buttons, and joystick to dodge falling meteors

MIPS Microprocessor | Verilog, SystemVerilog

- Created a multicycle microprocessor similar to the MIPS R2000
- Implemented full forwarding and register file bypassing to improve processing speed and efficiency
- Designed a set-associative cache and a memory controller to implement multi-cycle memory and account for cache misses

Technical Skills

Languages: C, Java, Javascript, C#, SQL, Python, HTML/CSS

Hardware: SystemVerilog, ModelSim, Altium

Other: Azure, Git, Linux, FreeRTOS

Extracurriculars

Men's Rowing

Fall 2021 – Fall 2023

- Two-time Academic All Big Ten and Big Ten Distinguished Scholar
- Perform well with a variety of teammates and resolve conflicts in boats quickly
- Balancing 20+ hours per week for practices and lifts year round