

Alexander Scheibe

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EDUCATION

University of Wisconsin - Madison

Bachelor of Science in Computer Science and Data Science

Sep. 2021 – Dec. 2024

Cumulative GPA: 3.85/4.0

- Sample Relevant Coursework: Object-Oriented Programming (Java), Data Structures and Algorithms (Java), Intro to Algorithms (Python, C/C++), Operating Systems (C), Machine Learning (Python), Data Science Programming I/II (Python, SQL), Data Modeling I/II (R), User Interfaces (React.js), Databases (Java, SQL)

WORK EXPERIENCE

Software Engineer Intern

Mandli Communications

Sep. 2023 – Present

Madison, WI

- Developed an API in C++ that interfaces with Kafka for data retrieval from custom-built LiDAR cameras for roadway imaging.
- Designed a storage manager using a greedy-based approach to efficiently select the optimal drive for real-time data storage of roadway scans.
- Building out a Django-based backend system to enable dashboard access for visualizing 3D roadway scans.

Software Developer

University of Wisconsin - Division of Information Technology

Jan. 2023 – Sep. 2023

Madison, WI

- Led development of NOVA, a custom employee management platform utilized by all 350+ DoIT employees.
- Pioneered and led redesign and migration of an existing API and database for employee management, ensuring strict adherence to the Model-View-Controller (MVC) paradigm and a robust RESTful interface.
- Utilized React.js and Node.js for full-stack development of various internal web applications that assist in daily operations such as inventory management and ticket tracking at DoIT.

Data Engineer Intern

Breakthrough - A U.S. Venture Company

May 2023 – Aug. 2023

Green Bay, WI

- Leveraged Apache Beam to architect a streaming ingestion workflow for clients to send shipping data for fuel cost analysis.
- Created an automated Excel-to-BigQuery data pipeline for real-time processing with GCP services, eliminating manual data wrangling, implementing data validation, and providing a dashboard to inform decision-making.
- Collaborated with cross-functional teams, including data scientists, analysts, and engineers, to understand niche data requirements and deliver a pipeline solution for sustainability analysis with existing data in our data lake.

ACTIVITIES

Peer Mentor

CS 537 - Intro to Operating Systems

Sep. 2023 – Present

- Lead weekly study groups to supplement lecture material and ensure students succeed in the course.
- Host office hours to directly answer student questions and assist in code debugging for various projects.

FIRST Robotics Competition

Mentor (2021 - Present) | Team Captain (2020 - 2021) | Lead Developer (2018 - 2020)

Sep. 2017 – Present

- Engineer robots capable of executing sophisticated tasks, including PID-based navigation and computer vision.
- Teach advanced development concepts to high school students, employing a hands-on approach within an agile environment.

PROJECTS

NOVA Employee Management System | *JavaScript, React.js, Node.js, Express.js, MySQL, Git*

- Web app was built from scratch, pitched to, and adopted by UW-DoIT to handle tasks such as employee scheduling and management.
- Implemented an automated scheduling algorithm to optimize shift assignments and minimize conflicts.
- Developed various dashboards for scheduling, shift posting, staff management, and a synchronized iCal feed tailored for each employee.

Sparks G-Code Editor | *Java, JavaFX, JUnit, FXML, Git*

- Desktop application that allows a user with no experience to write G-Code based on a WYSIWYG model.
- Application utilized in instruction by former high school and presented to U.S. Rep. Mike Gallagher.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Rust, C#, JavaScript, HTML/CSS, R, Bash/ZSH, SQL

Frameworks and Libraries: React.js, Node.js, Vue.js, Boost, Spring, Django, OpenCV, Apache HTTP Server, Nginx

DevOps and Cloud: CI/CD, GCP (BigQuery, Dataflow, GCS, Cloud Functions), AWS (S3), Docker, Kubernetes

Databases and Tools: MySQL, MongoDB, Postman, Linux, Git, Maven, CMake, npm, Jira, VS Code, Visual Studio