

Nico Salm

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EDUCATION

University of Wisconsin – Madison

Madison, WI

Bachelor of Science in Computer Science, Data Science

Expected May 2026

- Relevant coursework: Data Structures and Algorithms, Object-Oriented Programming, Computer Engineering, Machine Learning, Data Science Programming, Statistics, Calculus

EXPERIENCE

Informatics Skunkworks - Dane Morgan & B. Afflerbach Group

Sep. 2023 – Present

Research Assistant (Generative Machine Learning)

Madison, WI

- Curated diverse materials **datasets** for ML training, bridging experimental and predictive materials science.
- Predicted novel materials using **deep learning diffusion models** to encode and decode structural graph data.
- Worked as a focused team within a larger group, managing deliverables and deadlines.

IBM Qiskit Global Summer School

July 2023 – Aug. 2023

Quantum Excellence Scholar

- Developed in-depth knowledge and practical skills in **quantum computing** by completing the course and working with industry leaders, while demonstrating a commitment to professional development.
- Completed **5** intensive labs in the Qiskit ecosystem and gained insights into quantum computing applications, equipping myself with the tools to innovate and pursue further discovery.

Informatics Skunkworks - Dane Morgan Group

Jan. 2023 – June 2023

Research Assistant (Cloud-Based Materials Informatics)

Madison, WI

- Refactored machine learning models for materials properties and shared them as cloud resources through Cloud Foundry infrastructure, boosting accessibility of a key resource for the materials community by **90%**.
- **Improved takt-time** for non-technical researchers by building a high-quality commented code-base with relevant documentation, enhancing several machine learning models.

PROJECTS

nicosalm.dev | Astro, JavaScript, HTML, CSS, Git

May 2023 – Present

- Developed a modern and visually appealing personal website using the **Astro** web framework, leveraging its component-based architecture and static site generation capabilities.
- Implemented **responsive design** principles to ensure optimal user experience across various devices, utilizing CSS media queries and layout components provided by Astro.
- Integrated a night mode, enabling a seamless transition between light and dark color schemes.

Cornucopia | React, Bun/Next.js, MongoDB Atlas, Python, Leaflet Map API, Git

Sep. 2023

- Pioneered a robust framework for neighborhood gardeners and small-scale farmers to collaborate.
- Created a full-stack web application featuring an intuitive UI using **React** and TailwindCSS; integrated machine learning-driven data analytics and advanced visualizations utilizing Seaborn.
- Awarded **Best Agricultural Innovation** by John Deere at HackUIowa 2023.

Paper++ | React, Bootstrap, Axios, Node.js/Express, Google OCR API, Java, Git

March 2023

- Designed Paper++ during MadHacks 2023 to parse handwritten user-provided .png images (utilizing Google OCR API), **execute the handwritten code**, and provide output, all through an intuitive front-end.
- Engineered support for compilation of **unlimited images** allowing realization of complex programs.
- Recognized as a **finalist** (4th/56) at MadHacks Spring 2023.

TECHNICAL SKILLS

Programming Languages: Python, C/C++, Java, C#, HTML, CSS, JavaScript, SQL

Frameworks: React, Astro, Node.js, Bun, Qiskit

Infrastructure: MongoDB Atlas, Google Cloud, Cloud Foundry

Developer Tools: Git, Docker, GitHub Actions, GitHub Codespaces, Linux, JUnit