Kahlil Wassell

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EDUCATION

University of Chicago Chicago, IL
M.S Computer Science *Expected Graduation: December 2025*
Relevant Coursework: Python Programming, Discrete Mathematics, Algorithms, Big Data Application Architecture, Cloud Computing, Distributed Systems, Computer Systems, Databases

Harvard College Boston, MA
S.B Mechanical Engineering *May 2021*
Relevant Coursework: Multivariable Calculus, Linear Algebra, Circuit Design, Microcontrollers, Embedded Systems

PROFESSIONAL EXPERIENCE

McMaster-Carr Elmhurst, IL
Tech Training Leader LLM Prompt Library *March 2025 – Present*

- Spearheaded the design and implementation of a scalable LLM Prompt Library used as a capstone project for a full-stack development cohort.
- Led a 7-person cohort through data modeling, API design, and integration of prompt configuration logic into a .NET + React application.
- Architected a versioned prompt configuration system supporting structured prompt creation with user-defined variables, assistant messages, and model parameters.
- Developed extensible C# backend infrastructure using clean interfaces and DTOs for modular prompt assembly and retrieval.
- Mentored developers through system design trade-offs between relational and NoSQL data models, reinforcing concepts like surrogate keys, foreign key constraints, and query performance.

Software Engineer II *March 2023 – Present*

- **Developed and optimized** a MongoDB cache to store published product data, **designing schemas and building REST API endpoints** to support scalable and efficient data retrieval.
- **Implemented Apache Kafka**, enabling **real-time data synchronization** between distributed systems, **reducing content update cycles** from **days to seconds**
- **Created a C# API wrapper** and established **coding standards** for Apache Kafka integrations, ensuring future-proof and reusable code practices across engineering teams.

Software Engineer I *September 2021 - March 2023*

- **Designed and implemented RESTful APIs** and **microservices** using **C#, JavaScript, React, and MongoDB**, enabling seamless data management workflows.
- **Developed a centralized web application**, eliminating dependency on **50,000 spreadsheets**, and introduced a **semantic data model**, improving data consistency and accessibility.
- **Applied Object-Oriented Programming (OOP) principles** to build modular and reusable components, eliminating code duplication from the codebase.
- **Implemented front-end features** with **React**, improving UI performance and user interaction workflows.

PROJECT / ACADEMIC / RESEARCH EXPERIENCE

C.E.R.N ATLAS Experiment Geneva, Switzerland
Research Assistant *June 2019 - August 2019*

- **Developed Python simulations** using **ROOT** to model and predict detector performance for the **ATLAS New Small Wheel** at the **Large Hadron Collider**.
- **Designed and tested detector prototypes**, leveraging **Python scripts** and **data visualization tools** to validate performance under real-world conditions.
- **Presented findings** to senior research teams, contributing to design decisions for detectors deployed in 2022.

SKILLS

Technical: Python, Pytest, CI/CD, C, C#, Javascript, React, C++, HTML, CSS, SQL, MongoDB, MATLAB, Microcontrollers, Circuit Design, SQL, Docker, Distributed Systems, Amazon Web Services.