

Carl K. Freyer

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Work Experience

Major League Baseball Advanced Media	New York, New York
Software Engineering Intern – Media Engineering Team	June 2024 – Aug 2024
<ul style="list-style-type: none">- Increased team velocity by 10% on production level pipeline orchestration and dynamic ad insertion programs for MLB.tv live streaming and video on demand in an agile-scrum environment using Git and Jira.- Unlocked a revenue stream for the sales department through new Java/Spring Boot & PostgreSQL REST API endpoints developed using test driven development to schedule video slates in Google Ad Manager (GAM).- Increased developer efficiency and contributed to nine nines reliability through new Terraform modules that simplify Google Cloud Platform (GCP) pub/sub modules.- Improved data resiliency through double automated backup system on Google Cloud Platform (GCP) with Cloud Functions & Terraform deployed using git and CI/CD principles.	
Major League Baseball Advanced Media	New York, New York
Software Engineering Intern – Media Engineering Team	June 2023 – Aug 2023
<ul style="list-style-type: none">- Unlocked new MLB.tv customer features through a new full stack application with git, JavaScript/React, Java/Spring Boot, and PostgreSQL.- Wrote a role-based access system utilizing OAuth 2.0 standards and the Okta Identity Governance service.- Improved stream pipeline reliability and readability with new full stack application to view logs, configuration, and status created using git, JavaScript/React, Java/Spring Boot, and PostgreSQL.	

Project Experience

TRAC Writing Program Website	Bethlehem, PA
Lead Software Developer	Jan 2024 – Dec 2024
<ul style="list-style-type: none">- Improved program visibility through new ground up website with JavaScript, Python/Flask, MySQL designed with program director in an agile scrum environment following a minimum viable product design principle.- Increased student feedback views by 80% through REST API survey ingestion and publication with Chart.js behind a secure login for individual students and in aggregate for the public.- Utilized database schema to create a webpage that displays all students in the program, allows for filtering, sorting, and supports fuzzy search on filters.- Achieved usage by 99% of permitted users through natural user information forms & menus and efficient backend & database ingestion.	
Introduction to Parallel Programming (CSE 375)	Bethlehem, PA
Student Researcher	Jan 2024 – May 2024
<ul style="list-style-type: none">- Achieved greater than 30x speedup using a parallel, memoized version of K-means in C/C++ with TBB.- Created a novel implementation of Cuckoo hashing that had 10x speedup over serial implementations.- Wrote a paper that improved parallelized B+ Trees using bundled historical references for synchronization.	

Education

Lehigh University	Bethlehem, PA
Computer Science & Business / BS	Aug 2021 – Jan 2025
Mass Communications / Minor	
GPA: 3.98	
<ul style="list-style-type: none">- Relevant Coursework: Intro to Data Science (R), Database Systems Algorithms and Applications (Oracle SQL), Principles of Parallel Computing (C/C++), Fundamentals of Internetworking, and Network Security.- Activities: Vice President of Development at the Computer Science and Business Association, Data & Graphics Editor at the Brown and White, and Rossin Junior Fellow.	

Relevant Skills

Languages: Java, Python, JavaScript, TypeScript, C, C++, CSS, HTML, JSON, YAML, SQL, React, Spring Boot & R.
Technologies: Git, Jira, docker, Kubernetes, GCP, AWS, Maven, NodeJS, Figma, Linux, Unix, Windows, Jenkins, CI/CD, and Datadog.
Other: Scrum, agile, leadership, communication, writing, REST API development, test driven development, and Rugby Player.