JARED MAHOTIERE

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SUMMARY

Backend and systems software engineer focused on distributed services, C systems programming, .NET backend development, and SQL performance optimization.

EDUCATION

Purdue University - B.S. Electrical Engineering Technology (Computer Engineering Technology)
Minor: Computer & IT | Certificate: Entrepreneurship & Innovation | Expected May 2026

SKILLS

C, C#, TypeScript, Python, Java | PostgreSQL, SQL Server, Redis Streams | .NET, ASP.NET Core, Node.js, Express, React | Docker, GitHub Actions, Prometheus, Grafana, AWS | REST, gRPC, concurrency, POSIX networking

EXPERIENCE

Nucor Corporation - Software/Automation Engineering Intern | Darlington, SC | May-Aug 2024 and May-Aug 2025

- Built C#/.NET services integrating SQL Server and QMOS; reduced critical report runtimes 70-90% through indexing and query refactors.
- Shipped Blazor/.NET real-time operator dashboards with resilient UI state and consolidated KPI views for plant visibility.
- Added about 240 unit/integration tests (xUnit), CI quality gates, health checks, and structured logging to improve deployment confidence.
- Delivered automated reporting and alerting with Quartz.NET idempotent jobs, retry/backoff logic, and legacy VB to .NET/Blazor migrations.
- Supported industrial automation workflows tied to PLC/HMI production systems in a steel manufacturing environment.

PROJECTS

workflow-orchestrator - TypeScript, Node.js, Redis Streams, Postgres

- Executed 25/25 benchmark runs in 15.94s (1.57 runs/s) with DAG validation, consumer groups, idempotency, and run-state durability.

cachekit - C (C11), POSIX, RESP

- Built networked in-memory caching with RESP protocol support, low-level socket handling, and persistence primitives.

Telemetry Node - ESP32, FreeRTOS, C

- Delivered embedded telemetry firmware to demonstrate low-level debugging, protocol design, and systems reliability skills.