

Joseph Burton  
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## Objective

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Driven dedicated Software Engineer and Developer with a strong foundation in Information Technology and Computer Science. My experience ranges across backend and front-end application development, data engineering, data analytics with a background in logistics and commercial construction. I have a Master of Science in IT, and I hold a Bachelor of Science in Computer Science. I am looking for a challenging role that will leverage my technical and analytical skills, leadership experience and my ability to work through complex domains. I am smart. I am a fast learner. I want nothing more than to help you reach your project goals.

## Education

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<b>Master of Science in IT</b>	August 2025
University of Arkansas Grantham	
<b>Bachelor of Science in Computer Science</b>	November 2023
University of Arkansas Grantham	

## Experience

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<b>R&amp;N Transportation</b>	October 2023 – Present
Software Engineer and Developer	

### Data Pipeline

- Implemented data warehouse expansion with Sr Data Analyst, modeled R&N data flow by normalizing ingestion up to isomorphism with respect to our schema to

increase data availability and accuracy; as a result, R&N was able to forecast and make better predictions on their future returns.

- Aggregated and simplified data validation and transformations with Sr. Data Analyst, through optimized SQL queries, tools like dbt and Prefect for orchestration, this resulted in a more robust pipeline, mitigating data loss and ingestion failures by 100%.
- Improved Data Pipeline uptime by 20% (down by 6 minutes) by switching from RDD's to more modern practices and improving on how the team was partitioning their data: This was accomplished through Run-Length Encoding.

#### R&N Admin Panel

- Designed and Developed Administrative UI under the supervision of Project Sponsor, modeled ingested data, developed view compositions, and implemented the tie-in with back-end proprietary API, with micro-frontends (built in Typescript and React) error boundaries, and authentication. As a result, R&N Transportation was able to track revenues, and able to maintain accurate employee information.
- Design and Developed Company Database under supervision of Project Sponsor, domains included Compliance, HR, payroll, ELD logs and more; as a result, R&N will be able to save money and ultimately pay their drivers more and offer them better benefits.

#### R&N Client API

- Implemented REST API, under the coordination of the Project Sponsor, using the .NET Core Framework and C#, on-premises output-caching, rate-limiting, filtering, pagination, free observability via Aspire; as a result, R&N was able to track company data in near-real-time and employees were able to stay within compliance limits.
- Implemented REST API Gateway/Load-Balancer using .NET Core Framework, created API behind the LB, with health checks, LB rules, as a result R&N experienced near nine 9's, as a result mitigated API catastrophic failure and increased workload limit from 10,000 rps, to 30,000+ rps. shoring R&N for years into the future.

## R&N Database Development

- Mitigated Technical Debt by instituting SQL construction practices that favored CTE over nested queries, where over having, pushing filters early, avoiding scalar functions on indexes, broadcast on small tables: As a result, SQL was easier to maintain and became easier to reason about. Perhaps not always a performance improvement, but for DX it was a big QoL improvement.
- Used Window Functions to implement a Cumulative History Analysis to find discrepancies in Driver downtime and active log entries over a temporal window of X years. This was done without Sponsor approval but was ultimately excepted with fervor. This helped improve our business models and guard against future abuse of company time and mitigate future costs.
- I was able to translate many data pipelines from bash scripts to more modern python scripts. This decreased maintenance over time and allowed the team to increase the robustness of the data pipelines.

## **Skills**

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Languages	C#, Python, Bash, Powerhell, PL/SQL, SQL, Javascript, CSS, HTML, Typescript, (some Scala 3)
Frameworks	.NET Core 8 FastApi, FastEndpoints
Libraries	React 16 +, Prefect, dbt, Apache Spark, MinIO, Apache Iceberg, polars, EF Core, RabbitMQ, FluentValidation, MediatR, Polly, numpy ...
Methods	Agile, TTD
Platforms	Unix, Windows, Linux
Databases	Postgres, MSSQL Server, MySQL, SQLite
Software	Excell, PowerBI