

Austin McLaughlin

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<https://www.linkedin.com/in/austin-mclaughlin> | [Portfolio](#)

Seasoned software and engineer with over 5 years of experience in developing robust and scalable software and data applications. Adept in building innovative solutions using a wide range of technologies. Seeking a challenging role where I can drive business success and technological advancement, leveraging my proficiency in software design, data engineering, and system optimization.

Professional Experience

Caterpillar Inc.

Senior Data Engineer

January 2023 – Present

- Optimized graph database performance by implementing an improved data model and optimizing queries with Neo4j and Snowflake / SQL, achieving a 20x reduction in key job run times.
- Established a data observability framework using Python, Lambda, and Power BI, identifying data quality errors and improving forecasting accuracy by 10%.
- Collaborated with product owners and cross-functional teams to establish new standards for testing, release, and technical documentation, resulting in a 50% reduction in deployment time and improved software reliability.
- Implemented batch processing pipelines for Engineering Bill of Materials (EBOM) using Apache Spark and automated processing tasks with Apache Airflow, greatly enhancing data consistency and processing efficiency.

Senior Systems Development Engineer

June 2020 – December 2022

- Led process improvement initiatives using agile scrum framework and, increasing release cycles by 75%.
- Adapted Coupa SaaS platform to integrate the entire purchasing process for Caterpillar's business in 1 system globally.
- Integrated a real-time API from Coupa to internal systems, automating tax and AP rules at scale, particularly in diverse tax environments such as India. This automation eliminated manual approvals for over 100,000 invoices per year.
- Achieved a 30% reduction in incident tickets and increased invoice integration rates to 99.9%, reducing MTTR and improving FTR.

Systems Development Engineer

June 2018 – May 2020

- Developed and integrated Coupa's SaaS platform for global use, ensuring seamless connections to over 10 enterprise systems, managing over \$4B in annual spend.
- Engineered and automated integration processes by creating over 40 robust regression test scripts using Python and Selenium, eliminating the need for a dedicated testing team and drastically improving project velocity.
- Developed and maintained vending machine software hosted on-premises across Caterpillar facilities, ensuring high availability, 0 vulnerabilities, and operational efficiency through effective database management and feature implementation using Java and Oracle DB hosted on Windows servers and Windows POS machines.

Projects

Developed a cloud-hosted application utilizing external APIs, including ChatGPT and Google Cloud Platform. [View Demo](#)

Skills

Programming Languages: Python, SQL, Java, Swift, PHP, Spark, Bash, JavaScript, HTML/CSS, PyTorch

Data: Data modeling, Data Ingestion, Data warehouse, Data Pipelines, ETL, ELT, Snowflake, Postgres, Neo4J (Graph DB), NoSQL

Cloud Platforms: AWS (IAM, Sage Maker, EC2, Glue, Lambda, S3, CloudWatch Logs), GCP

DevOps: CI/CD, Azure Devops (Pipelines and Repos), Ansible, Git, Observability, Airflow, Security, Networking

Tools: Power BI, Coupa, CribMaster, Salesforce, Windows IIS, Linux, Selenium (Testing Automation)

Business: Stakeholder management, Customer Success Management, Strategy

Education

Indiana University - *B.S. in Informatics/Computer Science, Minor in Economics* - May 2018

Undergraduate Instructor, Data Structures in Python

Certifications

AWS Certified Solutions Architect

AWS Certified Machine Learning – Specialty