

# JOSEPH DEMCHER

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## SOFTWARE ENGINEER

Resourceful, challenge-seeking Software Engineer with a track record of success leading internal and client-facing development projects from concept through delivery. Strong skill set with experience in full-stack development and enhancement of existing technologies using automated machine learning and data solutions. Proven background in leveraging advanced technical insight to create innovative systems and solutions that solve business needs and challenges. Collaborative team member who works effectively with cross-functional technical and operational teams to achieve project, client, and organizational goals.

### Core Competencies & Technical Skills

Full Stack Software Development | Machine Learning | Data Science | Data Structures | Algorithms |  
Responsive Design | Code Review & Optimization | Cross-Functional Collaboration | Global Team Collaboration



Java | Python | JavaScript | React | Angular | Microservices | Amazon Web Services (AWS)  
Spring Boot | Jenkins | Swagger | Maven | NoSQL | Cassandra | Kubernetes | OpenShift | GraphQL  
HTTP | Docker | Airflow | Splunk | Scala | Kafka | Git | Agile/Scrum | SQL | Go | REST APIs

## RELEVANT PROFESSIONAL EXPERIENCE

**Optum, Basking Ridge, NJ**

**6/2020 – Present**

### Software Engineer (7/2021 – 8/2023)

Promoted to software engineer role to provide support for a real-time streaming pipeline that processes 60M+ records weekly. Work closely with fellow engineers on data management using Kafka and microservices written in Java.

- Involved in the entire software development lifecycle (SDLC) including requirement gathering, user story creation, system architecture design, coding, testing, debugging, and production-level support.
- Enhanced the streaming system by working with clients to create new data mappers for onboarding 8 new sources, as well as implementing features to the rule engine to transform raw system data.
- Analyzed user feedback and worked with the product team to build out a metadata object for a records management system, which provides real-time feedback on errors or warnings and reduced errors requiring intervention by 35%.
- Created hooks to automate and optimize code review, reducing overall time from commit to approval by 50%.
- Designed and implemented an alert system in Prometheus, which is used by system reliability engineers to quickly resolve issues; resulting in a 90% reduction in application downtime.
- Key contributor to the transition from on-prem services to a hybrid cloud environment via Amazon Web Services (AWS) delivering a 20% reduction in annual costs; designed a customizable mapper, reducing new source onboarding time by 75%.
- Selected for a leadership role, providing training, mentoring, and coaching for new hires and interns.

### Technology Development Associate (6/2020 – 7/2021)

Hired to support various software engineering projects, working closely with senior engineers to ensure project success.

- Worked on proofs-of-concept (POCs) for implementing TigerGraph and other graph databases for a government contract focused on health and insurance offerings. Applied machine learning techniques to develop a model for identifying at-risk customers based on specific data.
  - o Created a user interface using React for stakeholders to interact with the model and its analysis.
  - o Project is expected to drive \$10M in cost savings.
- Implemented automation via Airflow for a data ingestion process for existing data stored in a data lake; significantly reduced processing time from several weeks to less than 3 days. Supported the full ETL pipeline using Spark and MapReduce.

## ADDITIONAL EXPERIENCE

**Data Analytics Intern – Collabera Inc.**

**Research Assistant – Rutgers University**

**Teaching Fellow – Martin Tuchman School of Management**

**Teaching Fellow – Ying Wu College of Computing**

## EDUCATION

**Master of Science, Data Science – New Jersey Institute of Technology**  
**Bachelor of Science, Computer Science – New Jersey Institute of Technology**  
**Certified Scrum Product Owner – Scrum Alliance**