

# JOSEPH DEMCHER

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## SOFTWARE ENGINEER

Resourceful, challenge-seeking Software Engineer with 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 acumen 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, clients, and organizational goals.

### Core Competencies & Technical Skills

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



Java | Python | C++ | HTML5 | JavaScript | CSS | HTTP | React | Angular | Microservices | Amazon Web Services (AWS)  
Airflow | Spark | Scala | Hadoop/HDFS | MapReduce | Kafka | Git | FHIR | Prometheus/Alertmanager | SQL | Kibana | Go | APIs  
Spring Boot | Docker | Jenkins | Grafana | Maven | MySQL | MongoDB | HBase/Hive | OpenShift

## RELEVANT PROFESSIONAL EXPERIENCE

**Optum, Basking ridge, NJ**

**6/2020 – Present**

### Software Engineer (7/2021 – Present)

Promoted to software engineer role to provide support of ETL pipeline that processes 50M+ records daily. Work closely with fellow engineers on data management using Kafka and microservices written in Java. Perform all development tasks, including system architecture, coding, testing, debugging, and support.

- Optimized the ETL systems by creating new mappers for onboarding new sources, as well as implementing features to the rule engine to transform raw system data.
- Architected and built-out a metadata object for records management system, which provides real-time feedback on errors or warnings to mitigate risks.
- Created hooks to automate and optimize code review, reducing overall time from start to completion by 50%.
- Designed and implemented an alert system in Prometheus/Alertmanager, which is used by reliability engineers to quickly resolve issues; resulted in 90% reduction of application downtime.
- Key contributor for the transition from on-prem services to cloud environment through Amazon Web Services (AWS); designed a customizable mapper, reducing new source onboarding time by 75%.
- Selected for 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 proof-of-concepts (POCs) for the implementation of TigerGraph and other graph databases for government contract focused on health and insurance offerings. Applied machine learning techniques to develop model for identifying certain demographics based on specific data.
  - Created user interface using React and provided a GUI to complete data analysis for identifying specific demographics.
  - Project is expected to drive \$10M cost savings.
- Implemented automation for a data ingestion process for existing data stored in a data lake; significantly reduced processing time from several weeks to less than a day. Supported the full ETL pipeline using Spark and MapReduce.

## ADDITIONAL EXPERIENCE

**Finance/Data Analytics Intern – Collabera Inc.**

**Research Assistant – New Jersey Institute of Technology**

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

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

## EDUCATION

**Master of Science, Data Science – New Jersey Institute of Technology (Expected 8/2022)**

**Bachelor of Science, Computer Science – New Jersey Institute of Technology (5/2020)**

**AWS Certified Cloud Practitioner (Expected Summer 2022)**