

# Joseph Blom

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## EDUCATION

### Northwestern University

Evanston, IL

Master of Science, Robotics

Expected graduation: Dec 2025

- Relevant Coursework: Embedded Systems, Robotic Manipulation, Dynamics, Edge Computing

### University of Wisconsin-Madison

Madison, WI

Bachelor of Science, Computer Science

Sep 2016 – May 2019

- Relevant Coursework: Algorithms, Applied Statistics, Artificial Intelligence and Machine Learning, Computer Graphics, Computer Networks, Data Structures, Machine Organization, Operating Systems, Design of Programming Languages
- GPA: 3.53

## WORK EXPERIENCE

### Capital One - Agent Servicing

Chicago, IL

Senior Software Engineer: Full Stack

Mar 2022 – May 2024

- Designed several new serverless REST APIs and scripts used to interact with and support our membership system of record.
- Led the development effort to allow partnered companies to service customers and waive fees through Capital One's agent servicing UI using Vue as well as developed numerous enhancements to make the platform more extendable.
- Developed serverless system of record for recording membership data using ECS, dynamoDB, and Lambda functions to perform maintenance and data lake tasks.

### Capital One - Card Partnerships

Chicago, IL

Software Engineer: Full Stack

Aug 2019 – Mar 2022

- Worked with enterprise designers to upgrade shared frameworks for the primary Angular website to support the next generation of content-design and feature implementation used by all web teams.
- Maintained two high-visibility credit card support APIs through multiple pipeline migration initiatives and resilience exercises.
- Transitioned 3rd party data management platforms in house by upgrading existing EMR Spark jobs.

## PROJECTS

### Rewards Tracker Web Component (Angular, HTML5, CSS, Typescript)

- Led the project to create an Angular feature to display credit card rewards in the web client for all North American users using Angular, Typescript, and HTML.
- Generate the view utilizing a modular component system based on format information provided on an account-by-account basis.
- Fetched layout specifications in a third-party data store so that different styles could be generated dynamically.

### SSO Identity Provider (OIDC, Keycloak, Infinispan, AWS)

- Implemented OIDC industry standard for API communication with custom identity provider for partner use
- Deployed an sso identity provider conforming to industry standards with serverless infrastructure
- Designed a custom containerized infinispan stack to cache requests using multiple layers of resiliency

### Commission Payment Optimization (Java Spring, Cucumber, MySQL, Python)

- Developed application to calculate commission payments dynamically from historical data and remove the need for human correction
- Optimized script responsible for calculating and loading historical data into the database from a 4 hour runtime to 30 minutes

## CERTIFICATIONS

### Amazon Web Services

AWS Certified Solutions Architect - Associate

Jan 2021

## TECHNICAL SKILLS

Python	ROS2	C++	Amazon Web Services (AWS)	REST API Development	Serverless Architecture
Cucumber	Docker	Angular	Java Spring	Typescript	