Joseph Blom

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EDUCATION

Northwestern University   Evanston, IL

Master of Science, Robotics   *Expected graduation: Sept 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, Artificial Intelligence and Machine Learning, Computer Graphics, Computer Networks, Data Structures, Operating Systems, Public Speaking

WORK EXPERIENCE

Capital One - Partnerships   Chicago, IL

Senior Associate Software Engineer: Full Stack   *Mar 2022 – May 2024*

- Designed and implemented serverless REST APIs in Java used to interact with partnerships databases.
- Led development to allow partners to waive fees through Capital One's agent servicing UI with Vue.
- Developed serverless system of record for recording account data using Docker, ECS, and DynamoDB.
- Taught workshop on end to end testing using Cucumber testing framework to support enterprise initiatives.

Associate Software Engineer: Backend Microservices   *Aug 2019 – Mar 2022*

- Transitioned credit card APIs through Jenkins pipeline migrations and collaborated on resiliency exercises.
- Optimized commission calculation script using MySQL and Python to improve team performance.
- Managed rewrite of collections website in Angular and Typescript to modernize customer experience.

PROJECTS

Pool Playing Franka Emika Robot Arm (Python, ROS2, OpenCV, MoveIt)

- Worked with team to develop MoveIt API wrapper for interfacing with Franka Emika Robot Arm.
- Directed design for robot task space using april tags, TF, and RVIZ.
- Wrote end to end and demonstration and control loop in Python and MoveIt.

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

- Organized project to create Angular component to display rewards in web clients for North American users.
- Fetched HTML layouts from external teams so 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 SSO identity provider conforming to industry standards with serverless infrastructure.
- Built a custom, containerized Infinispan stack in Docker to cache partner requests behind layers of resiliency.

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	Vue