

Monika Mevenkamp

Software Engineer

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Summary

I am a highly skilled software engineer. My expertise includes object oriented and functional programming, front and backend web development, cloud computing (AWS and Azure), client-server and micro service architecture, as well as open source software development. I enjoy the challenge of matching real life business needs with solid, responsive, scalable, and maintainable technical solutions and enjoy explaining these solutions to nontechnical partners. I am always eager to learn new and better approaches to achieve goals and love mentoring more junior team members.

Technical Specialties

Languages: Kotlin, Java, Ruby, Python, PHP, Perl, JavaScript/TypeScript, C, C++
Packages/Frameworks: SpringBoot, JUnit/Mockito, Node.js, React, Ruby on Rails
Cloud: AWS, Azure
Databases: MySQL, PostgreSQL, Oracle, Mongo, Snowflake
Systems : UNIX /LINUX, Docker, Kubernetes, Jenkins, Spinnaker, DataDog, AppInsights, Snowflake
Tooling: Git, GitHub, AzureDevOps, IntelliJ
Extensive Experience in open source development

Education

Masters Degree in Computer Science with Thesis on Error Handling in Compilers
Rheinische Friedrich-Wilhelms-Universität Bonn, Germany

Experience

Senior Software Engineer - ShopRunner/DataWoks, Conshohocken, PA	Nov 2020-Jul 2022
Lead Software Consultant (SPR) at Dataworks	Aug 2022 - Feb 2024

FedEx Dataworks acquired ShopRunner shortly after I joined in Nov 2020. In May 2022 I contracted with SPR to work as a consultant in the same group at FedEx.

ShopRunner (SR) services provide traditional brand retailers with tools to expand into e-commerce. During my first year, I mostly worked on backend applications behind the SR checkout modal, deployed on retailer websites. I transferred to the group in charge of re-implementing SR's order and shipment tracking system (OMS) when it was about to lose its last developer. After SR was integrated into FedEx/Dataworks, I continued as a consultant. The OMS group transitioned in February 2023 to focus on green field development.

Software Development

- Worked mostly on backend applications written in Kotlin, Java, and Python, deployed in Azure and AWS cloud. Implementing event driven workflows using APIs, and messaging queues such as Event Hubs and Kafka, and storing data in Postgres and MySQL databases and data lakes like Snowflake.
- Worked with substantial data services, such as an order management service containing data on a ¼ billion orders and 100 million shipments; a shipment tracking service following 4 million shipments per year.
- Integrated a fraud detection API into SR's payment related API, taking the opportunity to clean up and simplify code and [presented the work](#) to SR engineers

- Closely coordinated efforts with the group's lead front end developer and on occasion implemented changes in the React front end application itself
- Led effort switching a legacy application to interface with a new external data service for shipment tracking information; this was successful without affecting downstream services despite a tight 6 week timeline.
- Led the effort of reimplementing API endpoints of a legacy application
- Implemented generic Azure Event Hub consumer and producer code used across several micro services
- Took the lead on the implementation of an inventory service MVP
- Documented OMS micro services on the system's GitHub repositories while I onboarded to the group. The documentation became very useful when additional developers joined
- Implemented parsing of order and shipment XML feeds used by retailers to push data into the SR infrastructure
- Helped implement a new set of microservices to accept and store order and shipment data from the Nylas's email Parsing service
- As part of the effort to fully replace SR's legacy order and shipment tracking solution, I investigated and advised on data mapping and functionality compatibility
- Lead knowledge transfer session in all projects as part of the developer onboarding process

Cloud Computing

- Used AWS as well as Azure
- Worked with Jenkins, Spinnaker, SumoLogic, DataDog, AppInsights, Docker, Kubernetes, Jira, GitHub, AzureDevOps

Other

- Mentored more junior developers by discussing programming approaches, through code reviews, and in pair programming sessions
- Reviewed code of team members, frequently suggesting significant improvements
- Gave presentations at engineering and company wide events, including a well received talk explaining how to use [Kubernetes secrets](#)
- Took part in interviews to evaluate candidate's software development knowledge.

Special Monitoring Project - Princeton University, NJ

2020

As a consultant at Princeton's Enterprise Infrastructure Group, I developed a testing framework in Python that used selenium bindings, to be integrated via Nagios plugins into the department's monitoring infrastructure. Based on this framework, I implemented specific Nagios plugins to monitor the integration points between web based systems, such as Princeton's Central Authentication System and various custom applications.

Digital Repository Infrastructure Developer - Princeton University, NJ

2014-2019

In my first 3 years at Princeton I solely worked on library related technology. The second 3 year term contract allowed me to branch out into Cloud computing.

Cloud computing and Automation:

- Developed Python code interfacing with Amazon's boto library, Active Directory, and CPANEL, WHCMS, and Kaltura Console Apis to automate maintenance tasks.
- Worked with EC2, RDS, S3, Lambda, Docker, Fargate, CloudWatch, CloudLog, Events, SNS, Route53, VPC, and IAM.
- In one project, I developed Python code to automatically provision email lists used on multiple servers. The script executes as a scheduled Docker Task in AWS Fargate triggered by CloudWatch events; another example project involved archiving over 4TB worth of videos. The Python CLI archives videos in Amazon Glacier and restores them on demand back to Princeton's Kaltura Video console by issuing calls to its API. This too executes in a Docker container, scheduled through CloudWatch events. Please find the code at github.com/pu/kaltura_archiver

Thesis Central Project:

- Co-managed project to develop a central undergraduate thesis submission system.

- Chose Vireo open source software as a basis and implemented in weekly sprints customizations to Vireo's Model, View, Controller layers (Play, Java, JPA, Beans, Shibboleth, Solr).
- Installed Thesis Central on Amazon infrastructure, such that the applications and its supporting resources are shut down outside the thesis submission period.
- Co-presenter on [Thesis Central at USETDA 2018](#) in Denver.

Repository Work:

- Supported [DataSpace](#) and Princeton's [Open Access Repository](#), both based on DSpace software.
- Implemented extensive User Interface customizations (Java, JSP).
- Worked closely with Mudd Archives, which maintains Dissertations and Undergraduate Senior Thesis in DataSpace collections.
- Advised researchers on publishing data sets.
- Developed jrdspace, a [JRuby gem](#), which significantly speeds up implementation of maintenance tasks by interfacing with DSpace Java objects directly from Ruby code; gave a [presentation about the gem](#) at the Open Repositories Conference 2016 in Dublin.
- Active member of the DSpace open source community; provided answers on listserv, contributed code and documentation (Wiki,JIRA); participated in User Interface Working Group with a Rails prototype.

Princeton's Open Access (OAR) Project:

- Participated with project stakeholders in requirements gathering.
- Implemented prototype workflow tool in Hydra (Samvera).
- Participated in evaluation of and decision to purchase Symplectic Elements to handle citation data collection as well as the selection and approval workflow.
- Created [waiver request application](#) (Ruby on Rails, MYSQL, Solr, CAS, capistrano).

Other:

- Mentored Intern in the summer of 2018 working on a Python project interfacing with AWS, Active Directory and Cpanel APIs.
- Presented at [Princeton's OIT events showcasing AWS features](#).
- Earned Princeton's [Fundamentals of User Experience Certificate](#)
- Earned [AWS Certified Cloud Practitioner Certification](#) (CLF)

Lead Software Engineer - Educopia, Atlanta, GA

2008 - 2013

- Technical lead for MetaArchive, a distributed network of preservation servers running the LOCKSS open source software developed at Stanford.
- Designed and Implemented a Ruby and Rails tool that became central to MetaArchive operations; it tracks preserved content and its status on behalf of member institutions.
- Moved network and content monitoring from a legacy PHP tool to a Ruby on Rails application; implemented Python-Django based fine grained monitoring; used Nagios for server monitoring.
- Led effort to formulate standards for document ingestion into the MetaArchive network; Stanford's LOCKSS team often referred users to the related documentation.
- Co-authored two chapters of '[A Guide to Distributed Preservation](#)' published by Educopia; gave the main technical presentations at annual meetings.
- Maintained Amazon Cloud servers for Rails applications, Educopia's website and Wikipedia.
- This was a remote role in a small team spread across 4 states.