

# CHRISTOPHER JOHNSON

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## SUMMARY

A results-driven, forward-thinking, and innovative senior software development engineer with in-depth experience in infrastructure operations, process improvement, project management, implementations, technical operations, applications management, design and development. Pioneers strategic solutions that enable the development of robust platforms and extensible components for clients. Translates technical aspects into business deliverables and ensures seamless integrations and operations. A resourceful problem solver who enables a company to enhance business growth and optimize potential and capabilities.

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## CORE COMPETENCIES

Cloud & Data Engineering | Architecture | Data Streaming and Eventing | Financial Transaction Processing | Encryption, Secure, & Sensitive Data Compliance | Big Data Queries & Interpretation | Data Mining & Visualization | DevOps / GitOps | Data Science

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## TECHNICAL SKILLS

Java / Scala, Python, SQL, Apache Kafka, Kafka Streams, Spark, Kafka Connect, Avro, OpenAPI, OpenSearch, Kubernetes, Docker, Helm, DevOps [Azure, GitHub, GitLab], Terraform, Go, Datadog, Spring Framework, REST, HTTP, AWS [ Lambda, EC2, EMR, Glue, RDS, RedShift, Lake Formation, Athena, DynamoDB, SageMaker ] / [ VPC, Route53, IAM, EKS, ECS, S3, EBS, EFS, Secrets Manager, Systems Manager, KMS ], mTLS, SASL, RBAC, OIDC, JWT, OAuth, SAML, PCI-DSS / SOC2, RDF, JSON-LD, JavaScript / Typescript, React, Angular, Redux, GraphQL, Gradle, Maven, JUnit, SPARQL, Groovy, XML, Linux, Android, Cypress, Jest, Git, Nginx, JIRA.

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## EXPERIENCE

WEX INC., Portland, Maine

### Senior Software Development Engineer 4, 2019-2024

- Led an Agile team of four to eight developers.
- Built real-time event streaming cloud-based infrastructure that greatly enhances the performance, stability and extensibility of distributed microservices and mobile payment solutions. This infrastructure processes millions of records per day.
- Wrote data stream and batch processing pipelines in Kafka Streams and Spark to analyze, de-normalize, federate and transform data structures for BI, web and mobile front-end consumers. Developed Spring Boot microservices with REST APIs. Deployed applications and services to Kubernetes with Azure DevOps pipelines and GitHub Actions workflows. Managed availability, scalability, latency, and efficiency of hundreds of deployments in multiple environments.
- Engineered AWS deployments by using Terraform and GitOps, incorporating Kubernetes, various Kafka cloud service providers (AWS MSK, Aiven, Azure Event Hubs), OpenSearch, and the Confluent platform (including Kafka Connect and Avro Schema Registry) in conjunction with Oracle database sources and Qlik Replicate CDC.
- Led engineering of analytics clusters in production for real-time high-volume data stream searching and indexing. Developed monitoring, logging, and instrumentation. Created and maintained metadata to improve data discoverability.
- Demonstrated expertise with secure and sensitive (PCI DSS) data processing including cryptography, tokenization, ACLs and RBAC, mTLS and SASL-SCRAM authentication, and PKI.

UNIVERSITY LIBRARY, Leipzig, Germany

### Data Scientist, 2017-2019

- Designed user interfaces, APIs, and ETL pipeline services. Developed producers and consumers for Apache Kafka.
- Coordinated front-end application development with complex data project requirements for the centralized German Manuscript Portal and integrated discoverable metadata from diverse academic image collections.
- Developed user search interface integration with Google AI endpoints for similarity detection and dynamic text extraction for IIIF sourced images. Aided with five major open-source projects, including TrellisLDP, Apache Jena, JSONLD-Java, Apache RDF Commons, and the IIIF / Project Mirador in cooperation with Stanford University.
- Deployed integrated containerized application services to hybrid cloud environments.

ACADEMY OF SCIENCES, Göttingen, Germany

**Software Developer, 2014-2017**

- Planned, developed, and implemented application framework for the online presentation and discovery of digital assets from museum and library collections including development of RESTful APIs and RDF data model.
- Resolved clients' problems in a timely manner, providing technical solutions with Fedora Commons Repository, Apache Camel, ActiveMQ, Apache Jena TDB, Djatoka, Apache Solr, Node.js, Wikibase, and eXist-db.
- Presented project research framework for international participants at conferences in Paris, Bonn, Bern, Dusseldorf, and Graz.
- Created robust user interface with XQuery and XSLT that sourced TEI-XML from a NoSQL database.
- Transformed legacy formatted data into interoperable RDF with abstract syntax.

WIKIMEDIA DEUTSCHLAND, Berlin, Germany

**Software Developer, 2013-2016**

- Supervised areas of project management, development process, design, and project analysis tools for Wikimedia Foundation.
- Enabled progress tracking of issues and organization of tasks for biweekly sprint planning through implementation of effective Agile project management system.
- Analyzed Wikidata project to improve implementation of collaborative software developer tools and methods.
- Wrote a master's thesis that defines a semantic ontology for Wikipedia.

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**ADDITIONAL EXPERIENCE**

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RIDGEVIEW GLASS INC., Washington, DC, **Project Manager, 2006-2012.** Acted as a logistics manager for the estimating, purchasing and delivery of valuable, fragile and massive international and domestic materials. Trained workers in accordance with the architectural, safety, and material logistics plans. Engineered and coordinated high-risk operations with union glaziers, general contractor superintendents, field foremen and heavy machine operators to provide for safe, effective and architecturally approved material installation. Responsibilities include design and specification review, detail analysis, field survey and measurement, preparation of shop drawings and submittals, shop fabrication, change orders, material purchasing and selection, billing, scheduling, coordination and execution of all phases of installation. Built relationship with clients, stakeholders, and staff to optimize company's revenue. Completed projects on time and within budgetary constraints by delivering exceptional work. Resolved complex architectural design issues.

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**EDUCATION**

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BRANDENBURGISCHE TECHNISCHE UNIVERSITÄT, Cottbus, Germany

**M.A., Kulturinformatik**

ITT TECHNICAL INSTITUTE, Mechanicsburg, Pennsylvania

**Degree in Specialized Technology (AST), Design and Drafting**

TRINITY COLLEGE, Hartford, Connecticut

**B.A., English**

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**CERTIFICATIONS**

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*Confluent Certified Developer for Apache Kafka*

*AWS Certified Data Engineer Associate*

*AWS Certified Cloud Practitioner*

*Microsoft Certified Professional System Engineer*

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**LANGUAGES**

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Fluent in Italian and German