Uday Kumar Bommala

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**Professional Summary**

Experienced Java Full Stack Developer with over 8 years of expertise in building scalable microservices and cloud-native applications using Java, Spring Boot, Angular, and cloud platforms like AWS and Azure. Proven track record of contributing to mission-critical projects at organizations like Blue Cross Blue Shield, NASA-IMPACT, and EY, with strengths in system modernization, IAM integration, and data-intensive workflows.

# Technical Skills

**Languages/Frameworks**: Java 8, Spring, Spring-Boot, Hibernate, Spring JPA, Spring Cloud, Spring Batch, Akka, JMS, HTML/CSS, JavaScript, Angular, React JS, SQL, Python

**Technologies**: Apache Kafka, Kafka Connect, Linux, Nginx, Jenkins, GitHub, Power BI, AWS, Microsoft Azure, Docker,

Kubernetes, Apache Airflow, Grafana, Prometheus, Node Exporter, Virtualization, Junit5, Mockito, IBM MQ, ELK (Elastic Search, Log Stash, Kibana), MuleSoft Any point Platform, Atlassian Jira, Bamboo, Confluence, MuleSoft Any point Platform, Atlassian Jira, Bamboo, Confluence,

**Cloud Services**: AWS Ec2, AWS S3, AWS Lambda, AWS ECR, AWS API Gateway, AWS CloudWatch, Azure EKS,

Azure Data Lake, Azure Cosmos DB, Azure DevOps, Pivotal Cloud Foundry (PCF)

**Databases/Storage**: My SQL, MS SQL, Postgres SQL, Elastic Search, Azure Cosmos DB, Mongo DB, AWS S3, Azure Blob Storage, IBM DB2

**Security**: ForgeRock IAM, Open AM, SSO, MFA, JWT, Authentication, Authorization, SSL, Evilginix

**Developer Tools**: Eclipse, Spring Tool Suite (STS), Visual Studio Code, Maven, Gradle, Mobaxterm, Postman,

SourceTree, Splunk, SOAP UI, Atlassian Tools

**SDLC Methodologies**: Waterfall, Agile Methodology

**APIs & Communication Protocols**: REST, gRPC, SOAP, GraphQL

# Publication

* Bommala, Uday Kumar et al.,” Blaze: A High-Performance, Scalable, and Efficient Data Transfer Framework with
* Configurable and Extensible Features: Principles, Implementation, and Evaluation of a Transatlantic Inter-Cloud Data Transfer Case Study,” 2023 IEEE 16th International Conference on Cloud Computing (CLOUD), Chicago, IL, USA, 2023, pp. 58-68, doi: 10.1109/CLOUD60044.2023.00016.

# Certifications

* AWS Certified Solution Architect Associate, AZ-900 Azure Fundamentals, AZ-204 Azure Developer

**Education**

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| --- | --- |
| **University of Alabama at Huntsville** | **GPA: 3.66** | **Jan 2022 - July 2023** |
| *Master's in computer science* | *Huntsville, Alabama* |
| **JB Institute of Engineering and Technology** | **Aug 2013 – July 2017** |
| *Bachelor of Technology in Electronics and Communications* | *Hyderabad, India* |

# Work Experience

## Blue Cross Blue Shield of Illinois (HCSC) | Full Stack Developer | Charlotte, NC Sep 2023 – May 2025

**Blue Chip Claims Core Adjudication** | *Spring-Boot, Spring-Batch, MQ, DB2, Angular, MuleSoft, UCD, PCF, open AM, ELK, Control-M*

* Involved in upgrading the Spring Boot version for multiple services by resolving compatibility issues and ensuring seamless transitions to newer versions.
* Involved in migration of IBM MQ infrastructure from legacy AIX systems to Red Hat Enterprise Linux, including planning, configuration, testing, and deployment, resulting in improved system performance, reduced operating costs, and enhanced platform supportability.
* Contributed to the migration of one of the pricing services from WebSphere Application Server (WAS) to Pivotal Cloud Foundry (PCF) using a lift-and-shift approach, ensuring seamless functionality and scalability.
* Took a pivotal role in elevating both frontend UI design and API integration for the application responsible for managing the list of providers exempt from an external vendor.
* Integrated ForgeRock IAM-based access control in backend services using pre-built authorization libraries and annotations to enforce role-based access policies; collaborated with frontend teams to decode session tokens and implement UI directives that dynamically control feature visibility based on user roles and entitlements.
* Establish connections to MQ (Message Queue) using JMS (Java Message Service) technology to facilitate seamless message exchange, including both publishing and consuming messages from the MQ infrastructure.
* Manage the build and deployment processes across diverse environments to ensure seamless transitions and compatibility across various stages of development, testing, and production, using Jenkins for builds, Urban Code Deployment (UCD) for deployments, and Pivotal Cloud Foundry (PCF) as the environment.
* Configure alerts in Kibana, a comprehensive monitoring tool within the ELK (Elastic Search, Log Stash, Kibana) stack, to facilitate proactive monitoring and ensure timely notification of critical system events for prompt response and mitigation.
* Utilize Control-M to orchestrate and automate the scheduling of batch jobs, ensuring timely execution based on predefined schedules.
* Utilize SonarQube, a code quality analysis platform, to identify and address code smells, enhancing code quality and maintainability.
* Leverage the Check Marx tool to meticulously identify and mitigate security vulnerabilities, thereby ensuring the robustness and integrity of software quality.
* Re-engineer legacy WebSphere Application Server applications into asynchronous microservices architecture as part of tech modernization efforts.
* Utilized MuleSoft Any point integrations to interact with external vendor APIs, ensuring proper data flow and verifying that payloads were transformed at the Mule layer to match vendor-specific requirements and formats.
* Provide production deployment support to ensure smooth and successful deployment of software releases.
* Leverage the latest features of Java while transitioning legacy code into Spring Boot microservices, ensuring modernization and optimization of the codebase.
* Develop integration test cases using the JUnit framework to simulate claim processing on local developer machines and debug any identified discrepancies between expected and actual outcomes.
* Develop JUnit tests to ensure comprehensive code coverage and facilitate robust testing of the codebase.
* Perform post-release tasks such as merging release branch code into future releases and managing branching, tagging, and releases using GIT.
* Actively participated in Agile ceremonies including daily Scrum meetings, sprint planning, user story estimation using Jira, sprint retrospectives, and sprint demos to ensure alignment, transparency, and continuous improvement across the development lifecycle.

## NASA-IMPACT | **Graduate Research Assistant** | Huntsville, United States Apr 2022 – July 2023

**HLS Data Transfer Study** | *Java, Python, Flask, Apache Airavata-MFT, Airflow, React-JS, AWS Ec2, Lambda, AWS API Gateway*

* Engaged in the development of a robust and secure data transfer framework to facilitate the seamless transfer of 5.7 petabytes of satellite image data from OVH cloud containers to AWS S3 Buckets, enabling high-profile collaborations with NASA and the European Space Agency within 28 days.
* Involved in researching the available solutions and contributed to end-to-end development of the implemented transfer solution.
* Developed a Flask-based Python Rest API service dedicated to managing the metadata of data files.
* Developed a custom transfer dashboard (React JS) that enables real-time tracking of transfer status, leveraging a Grafana dashboard as the backend infrastructure.
* Developed hierarchical data workflows/pipelines in Apache Airflow to orchestrate the transfers in Airavata-MFT.
* Developed and deployed AWS Lambda functions for file processing and data transformation, containerized with Docker and published via Amazon ECR to support custom runtimes; integrated with Amazon API Gateway to expose secure, scalable serverless endpoints.
* Installed and configured Node Exporters on all EC2 servers for real-time data transfer monitoring; integrated Prometheus for data collection and Grafana for visualization, creating custom tiles to display throughput, transfer statistics, and estimated completion times.
* Published a research paper on the development of this robust and secure data transfer framework at the IEEE Cloud Conference.

## University of Alabama at Huntsville | Huntsville, United States Jan 2022 – Apr 2022

**Graduate Teaching Assistant** | *MFA, Evilginx, Digital Ocean, Namecheap, PKI, SSL, Virtual Machines, Metasploit*

* Graduate teaching assistant for Network Security and Mobile Digital Forensics Courses
* Demonstrated Network Security and Mobile Security Projects to the students and assisted them in projects.

## EY GDS | Senior Software Engineer | Bangalore, India Jan 2021 – Dec 2021

**CGM Reporting (Client: Macquarie** | *Java, Spring-Boot, Akka, Microservices, Azure EKS, Splunk, Solace*

* Contributed to development of an event-driven architecture product based on asynchronous microservices, facilitating accurate reporting of trading transactions to regulatory bodies.
* Involved in understanding the end-to-end product development. Used Akka pipelines to flow the trading transactions as messages to the queues for processing and reporting the transactions to regulatory authorities.

**ITM (Client: Westpac)** | *Java, Executor Framework, Spring-Boot, Azure, Azure Kubernetes, Docker, Azure Data Lake, Azure Cosmos DB*

* Involved in creating a platform which provides In the Moment customer experience capability that uses a scalable, event-driven data and analytics platform to provide the enabling of real time and near-real time insights capabilities.
* Developed a Micro-service which is designed to continuously detect the Cassandra database changes by leveraging the change-feed feature provided by Azure Cosmos DB and insert the updated data into PostgreSQL tables by following the SCD (Slow Change Detection) type 2 implementation.
* Developed a Stand-alone micro-service which regularly take snapshot of PostgreSQL tables data and upload to Azure Data Lake Storage Gen 1 for data analytics purpose
* Actively involved in deployments on Azure Kubernetes Cluster and performance enhancements by implementing multi-threading mechanism.

## Object Frontier Software Pvt Limited | Junior Software Engineer | Chennai, India July 2017 – Jan 2021

**Equator NG (Client: Altisource)** | *Java, Spring-Boot, Spring Data JPA, ForgeRock IAM, SSO, Linux, Amazon Web Services*

* Created a Next generation Equator Platform by working as a Back End engineer and involved in User Management and File Operations services.
* Created a user management micro-service which is integrated with Forge-rock AM to manage users, groups, roles and privileges.
* Created a File Operations micro-service which owns the responsibility of managing files on AWS S3 (simple storage service).
* Successfully deployed and configured ForgeRock Identity and Access Management (IAM) solution across diverse environments, enabling efficient user authentication and access control.
* Led the creation and management of user accounts, groups, and privileges within the ForgeRock IAM system, ensuring streamlined access provisioning and adherence to security policies.
* Played a key role in debugging and resolving issues within Spring Boot microservices.
* Responsible for deploying microservices into the AWS cloud across multiple environments.

**Equator Search (Altisource)** | *Java, Spring-Boot, Angular, Linux, Apache Kafka (Connect), Elastic Search, MS SQL, Debezium*

* Worked on a Proof of Concept (POC) initiative aimed at synchronizing data between a relational database and a non-relational database utilizing a distributed event streaming platform.
* Researched on identifying the scalable, robust, and optimal solution for data synchronization.
* Delivered a POC for data synchronization between SQL and Elastic Search by enabling CDC in SQL database and using Confluent Kafka, a distributes streaming platform as a medium.

**SHDP (Altisource)** | *Java, Spring-Boot, Angular, Jasper Reports/Tools, Zuul Gateway, JWT, AWS, Authorize.Net, ETL, Atlassian tools*

* Developed Spring House Data portal web application which serves the end user with a report containing details (Rental Analysis, Market Metrics Data) of a property (House).
* Used Jasper ETL tool to create data pipeline to migrate data from legacy database schema to micro service architecture-based database schema.
* Worked as a Full Stack developer by involving in both front end as well as in the back-end micro-services.
* Developed UI pages using HTML5, Angular, and CSS, while seamlessly integrating REST APIs into the front-end of a web application.
* Actively contributed to the creation and continuous improvement of microservices, aligning them with project requirements and evolving needs.
* Played an active role in issue resolution across multiple environments, providing support to the team in achieving sprint deliverables.
* Deployed and managed Spring-based microservices using Atlassian Bamboo, automating build and release pipelines across AWS EC2 instances for multiple environments (Dev, QA, Prod), ensuring consistent and reliable deployments throughout the software delivery lifecycle.
* Created and maintained technical documentation and workflow diagrams using Confluence, ensuring clear communication of system architecture and data flows.