Yash Ananta Zode

(414) 736-7662 | zodeyash98@gmail.com | yashzode.github.io | https://www.linkedin.com/in/yashzode/

PROFESSIONAL EXPERIENCE

Research Intern (Software Engineer), ***University of Wisconsin-Milwaukee*** ***Aug 2024 – Present***

- Improved backend reliability by 40% through Java Multithreading, Batch Processing, Exception Handling, and third-party API integrations, reducing data synchronization delays by 30% across platforms.
- Designed microservices architecture with Spring Boot, Docker, and Kubernetes; automated CI/CD processes using Jenkins, reducing deployment times by 35%, downtime by 20%, and accommodating 30% more user traffic.
- Developed reusable components with Singleton and Observer patterns, ensured 95% plus test coverage using JUnit and Mockito, reducing production defects by 30%, and achieved a 95% project success rate through Agile collaboration.
- Built responsive and interactive frontend interfaces using JavaScript, improving user experience and streamlining cross-platform functionality in collaboration with backend systems.

Key Skills Utilized: Java, JavaScript, Spring Boot, Docker, Kubernetes, Jenkins, JUnit, Mockito, Agile Methodologies, Microservices Architecture, CI/CD, API Integration.

Programmer Analyst, ***Cognizant*** ***Nov 2022 – Aug 2023***

- Engineered secure, high-performance payment gateway systems handling over 2 million daily transactions using Java, Spring Boot, RESTful, and SOAP-based APIs, achieving 99.99% uptime, SOA compliance, and reducing fraud rates by 15% through two-factor authentication (Email OTP).
- Enhanced backend performance by 20% through optimized data structures, multithreading, and integration of Singleton and Factory design patterns, streamlining real-time payment processing and cross-platform interoperability.
- Resolved 20+ critical frontend bugs in Angular and JavaScript, improved user experience, and automated CI/CD pipelines with Jenkins, maintained 85% test coverage using Jasmine, decreasing production defects by 30%.

Key Skills Utilized: Java, Spring Boot, RESTful APIs, SOAP APIs, Angular, JavaScript, Jenkins, Jasmine, Multithreading, Design Patterns (Singleton, Factory).

Junior Software Engineer, ***Comau*** ***Oct 2020 - Nov 2022***

- Developed and deployed 20+ scalable Spring Boot applications and RESTful APIs, optimized Java based algorithms (Recursion, Backtracking, Breadth-First Search, Depth-First Search) and data structures, designed fault-tolerant backend services using RabbitMQ, JDBC, Multithreading, collectively boosting system scalability by 25% and messaging reliability by 30%.
- Collaborated with frontend teams to resolve performance bottlenecks, create reusable Angular and JavaScript components, and enhance user experience by reducing load times by 20% and development time by 15%.
- Automated CI/CD pipelines using Jenkins and Docker, integrated OPCDA and OPCUA servers for reliable real-time communication, applied scalable design patterns (Singleton and Factory) to reduce code redundancy by 15%, and monitored systems with Prometheus and Grafana, achieving 99.95% uptime.

Key Skills Utilized: Java, Spring Boot, RESTful APIs, Angular, JavaScript, Jenkins, Docker, RabbitMQ, JDBC, Multithreading, Prometheus, Grafana, Design Patterns.

Internship Trainee, ***Comau*** ***Nov 2019 - Aug 2020***

- Developed an Android application for real-time production monitoring, increasing system connectivity and data processing efficiency by 25% by leveraging Java programming and integrating with the In.Grid IoT platform using Thingworx services.
- Improved plant productivity and quality by creating an interface that connects machines and robots, resulting in a 20% reduction in maintenance costs and a 15% enhancement in production efficiency.
- Streamlined platform development on Windows systems by utilizing Thingworx tools for JavaScript coding, enhancing database access reliability by 30%.

Key Skills Utilized: Java, Android Development, JavaScript, Thingworx IoT Services, In.Grid Platform Integration.

Software Intern, ***Indeed Inspiring InfoTech*** ***Nov 2017 - June 2018***

- Led a team of five in deploying scalable cloud infrastructure, enhancing operational efficiency by utilizing OpenStack.
- Contributed to big data processing capabilities by implementing robust solutions with Hadoop, resulting in a 40% increase in data handling speed.
- Developed a Java-based inventory management system, improving stock tracking accuracy and user experience by introducing automated features and user-friendly interfaces.

Key Skills Utilized: OpenStack, Hadoop, Java, Team Leadership, Big Data Processing, and Software Development.

EDUCATION

Master of Science, Computer Science, *University of Wisconsin-Milwaukee* ***May 2025***

- **Relevant Coursework:** Data Structures & Algorithms, Object-Oriented Programming, Software Development Lifecycle
- **Achievements:** Graduate Teaching Assistant, Awarded the Chancellor's Graduate Student Award.

PROJECT EXPERIENCE

Machine Learning-based Automated Admission Recommendation System
Environment: Academic research in machine learning and web development.
Technologies: Tesseract OCR, Hugging Face transformers, TensorFlow, Scikit-learn, Flask, React.

- Designed and implemented an automated admission system using OCR and NLP models to process and analyze university application documents, significantly enhancing decision-making speed and accuracy.
- Developed a predictive machine learning model to assess candidate suitability based on quantitative and qualitative data, leading to a dramatic reduction in manual review time.
- Engineered a web-based interface with Flask and React, providing a seamless user experience for document upload and real-time analysis, improving user engagement and system accessibility.

CloudEduTrack: Accessible Online Quiz Platform
Environment: Web Development, Cloud Infrastructure
Technologies: Angular, JavaScript, Spring Boot, AWS, Azure, Docker, Kubernetes

- Led the design and development of a voice-activated quiz platform using Angular, JavaScript and Spring Boot, significantly improving accessibility (95%) for visually and motor-impaired users.
- Increased user engagement by 40% by implementing adaptive UI themes and advanced speech recognition using JavaScript-based APIs
- Managed platform scalability and reliability by deploying services on AWS and Azure using Docker and Kubernetes.

IOT Web platform for Plant Control and Monitor
Environment: IoT, Manufacturing, Cloud Infrastructure
Technologies: Java Spring Boot, REST APIs, MongoDB, PostgreSQL

- Improved manufacturing efficiency by 40% through development of microservices-based MES platform with real-time monitoring using Java Spring Boot and REST APIs.
- Enhanced data storage efficiency by 25% through MongoDB and PostgreSQL integration.
- Facilitated seamless system integration by directly collaborating with customers, resolving 90% of issues during deployment

FilesCollector Application
Environment: Java Spring Boot, Microservices; Technologies: RabbitMQ, PostgreSQL

- Developed a monolithic Java application that automates the collection and metadata extraction of files from specified folders, enhancing data transmission efficiency to the MES server via secured API connections.
- Designed the application to allow end-user configuration adjustments based on file location and MES server IP address, resulting in increased adaptability and ease of maintenance for different production environments.

FileTrasher Application
Environment: Java

- Engineered a Java-based system to automate the deletion of files within a folder after a set interval, incorporating a cron job scheduler to manage operations effectively.
- Implemented user-configurable settings including file location, type, and deletion schedule, providing clients with flexible and understandable tools to adapt the system to future needs.

TECHNICAL SKILLS

- **Programming Languages**: Java, Python, JavaScript
- **Frameworks & Libraries:** Spring Boot, Flask, Angular, PyTorch
- **Cloud & DevOps**: AWS, Azure, Docker, Kubernetes, Jenkins, CI/CD
- **Databases & Messaging**: SQL, PostgreSQL, MongoDB, MySQL, Kafka, RabbitMQ
- **Monitoring & Observability**: Prometheus, Grafana
- **Testing & Development Practices**: REST APIs, Test-Driven Development , Git, GitHub, Agile Methodology, Maven, Gradle

CERTIFICATIONS AND PUBLICATIONS

- API's and Microservices developer certification
- Building Scalable Java Microservices with Spring Boot and Spring Cloud certification.
- Certified Red Hat System Administrator (RHCSA)
- **Copyright**: EXAMINATION PAPER SETTER AUTOMATION SYSTEM (Registration Number: SW-12888/2019)
- **Research paper**:
  - Card Payment Using Three-Way Security, Published in JETIR, February 2020
  - Energy: Rechargeable Batteries and Sustainable Development, Published in IJETSR, Feb 2018
  - GEOGRAPHIC ROUTING IN DUTY-CYCLED INDUSTRIAL Wireless Sensor Networks with Radio Irregularity, Published in IJEDR, May 2017