



Punyasloka Mahapatra

Software Engineer | 5+ Years in System Design, Cloud-Native Microservices | Java, Spring Boot, Python, AWS, Generative AI

[Bengaluru](#) | [8688298770](tel:8688298770) | punyaslokamahapatra@hotmail.com | <https://punyasloka-mahapatra.hashnode.dev/>

Summary

Software Engineer with 5+ years of experience in **Java, Spring Boot, Python, and AWS**. Skilled in **microservices, system design, and REST API development**, with a strong focus on **scalable architectures, performance optimization, and cloud cost efficiency**. Experienced in building **distributed systems** and integrating **Generative AI solutions** into modern applications.

Experience

Thermo Fisher Scientific **September 2021 - Present**
Software Engineer II Bengaluru

- **Architected and deployed scalable microservices** for a large-scale enterprise platform, redesigning core modules to improve request processing efficiency by **45%** and significantly enhancing system reliability and uptime.
- **Led comprehensive performance testing initiatives** across multiple services, identifying bottlenecks and reducing system vulnerabilities by **30%**, while optimizing AWS infrastructure costs by **20%** through resource right-sizing and improved monitoring.
- **Enhanced CI/CD pipelines** by implementing automation, best practices, and standardized workflows, resulting in **40% faster deployment cycles** and a **60% reduction in manual intervention**, ensuring more reliable and repeatable releases.
- **Automated critical engineering workflows**, including monitoring, reporting, and repetitive tasks, reducing operational overhead by **35%** and saving the team **25% of annual effort**, enabling focus on higher-value engineering initiatives.

Thermo Fisher Scientific **August 2020 - September 2021**
Software Engineer I Bengaluru

- **Scaled user access systems** to support millions of users by optimizing authentication workflows and refactoring service architecture, achieving **high availability, improved resilience, and seamless user experience**.
- **Led zero-downtime deployments and system integrations** across 5+ cross-functional teams, coordinating backend, DevOps, and QA efforts to ensure **smooth feature rollouts with minimal user disruption**.
- **Strengthened security frameworks** through implementation of advanced encryption and token-based access, reducing potential security risks by **over 40%** and enhancing overall platform protection.
- **Optimized 20+ REST APIs** by implementing caching, load balancing, and refactoring inefficient endpoints, improving response times by **up to 60%** and enhancing system performance for end-users.

Education

Amrita School of Engineering **July 2016 - August 2020**
Electrical & Electronics Engineering Bachelor of Technology
8.83

Projects

Compliance Monk

Engineered an automated SDLC compliance agent, cutting manual compliance effort by **70%** and proactively closing gaps across the software development lifecycle, ensuring **100% adherence to regulatory and internal standards** while accelerating development efficiency.

AI-Powered Metrics & Optimization Tool

Built a Generative AI-powered metrics analysis tool, enabling engineering teams to **identify bottlenecks, optimize delivery timelines, and make data-driven decisions**, resulting in **measurable improvements in productivity, operational efficiency, and project delivery performance**.

Skills

Python ●●●●●	Java, Python, Spring Boot, RESTful APIs ●●●●●	Microservices Architecture ●●●●○	AWS (EC2, S3, Lambda, API Gateway, RDS) ●●●●○	Generative AI, Agents, MCP ●●●●○
------------------------	---	--	---	--

Professional Interests

Exploring emerging technologies such as AI, Cloud Computing, and Cybersecurity to drive innovation	Contributing to open-source projects and engaging with the tech community to share knowledge	Pursuing continuous learning and professional certifications to stay at the forefront of IT advancements
---	---	---

Certifications

Career Essentials in Generative AI Microsoft & LinkedIn	TensorFlow for AI/ML DeepLearning.AI	Agentic AI for Developers LinkedIn
---	--	--

Awards

Employee of the Month

Thermo Fisher Scientific

Recognized for exceptional performance and innovation, consistently delivering impactful solutions that improve processes, exceed benchmarks, and strengthen organizational effectiveness.

You Made a Difference (YMAD)

Thermo Fisher Scientific

Awarded for key contributions to major projects, achieving successful delivery ahead of schedule and improving efficiency by 90%.

Delighting Our Customer

Thermo Fisher Scientific

Acknowledged for ensuring seamless project delivery that enhanced client satisfaction scores by 80% while actively supporting team collaboration and performance.

Innovation Award

Thermo Fisher Scientific

Honored with the Innovation Award for introducing forward-thinking strategies that enhanced efficiency, optimized workflows, and drove organizational improvements.

Publications

Reduction of Human-Wild Animal Conflicts Using IoT Enabled Smart Drones

IEEE Explore

- Engineered an IoT-enabled drone system with aerial robotics, Raspberry Pi, image processing, and machine learning to detect and deter elephant intrusions in farmland; integrated Bolt IoT modules for real-time farmer alerts.
- Achieved **92% detection accuracy**, delivered **alerts within 5 seconds**, and reduced crop damage incidents by **over 70%**, significantly improving farm security.

Languages

English ●●●●●	Telugu ●●●●○	Odia ●●●●●	German ●●●○
-------------------------	------------------------	----------------------	-----------------------