

BISHAL MAHAT

SUMMARY

Senior Software Engineer building scalable backend systems in financial services and blockchain environments. Experienced in designing secure, reliable, and observable distributed systems supporting high-value transaction workflows. Strong background in Kubernetes-based infrastructure, API design, and regulated-domain engineering.

EXPERIENCE

Senior Software Engineer

G-Research | Dallas, TX | August 2025 - Current

- Developed workspace tools using **Go** and **Python** enabling quants and engineers to utilize high-performance computing.
- Automated deployment processes using CI/CD pipelines and scripting tools for efficiency with **Jenkins**, **ArgoCD**, and **Terraform**.
- Managed containerized workloads with **Docker** and orchestrated deployments via **Kubernetes**, optimizing CPU/memory allocation, autoscaling, and cluster resource efficiency.
- Built API solutions in **Go** using **Gin** for seamless integration with cross-functional teams.
- Developed internal user interfaces using **React** and **TypeScript** to enable researchers to manage compute workloads and monitor job execution.
- Built PR bots for AI code review, signed code approval, auto-merge, notify Slack notifications, etc.
- Built API solutions in **Go** for seamless integration with cross-functional teams. Oversaw **Kubernetes** cluster management using Helm charts for application deployment.
- Created end-to-end monitoring systems with **Prometheus** and **Grafana**, integrated into Kubernetes clusters.
- Designed secure data storage solutions using **PostgreSQL**, ensuring ACID compliance and auditability for sensitive research datasets.
- Designed and deployed an **LLM**-powered internal knowledge assistant using Retrieval-Augmented Generation (**RAG**) architecture to support quant research workflows.
- Mentored junior engineers on best practices and emerging technologies to foster growth.

Senior Full Stack Developer | Blockchain Engineer

R3 | Remote | October 2022 - June 2025

- Engineered private blockchain network for client, enhancing data security and streamlining internal processes.
- Developed smart contracts in Solidity to automate business logic and ensure tamper-proof transactions.
- Created decentralized applications (dApps) using Web3.js for wallet connection and transaction signing.
- Constructed application in Go for flashing hardware devices for over-the-air updates.
- Designed hybrid database systems combining Hyperledger Fabric's LevelDB with AWS RDS, balancing immutability and data flexibility.
- Developed user-friendly dashboard with React.js and Node.js for monitoring blockchain transactions and network health.

CONTACT

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TECHNICAL SKILLS

- Go / Python
- Typescript and JavaScript frameworks
- React and AngularJS
- Blockchain technologies
- Hyperledger Fabric and Solidity
- Database management systems
- Java and Kotlin programming
- Web services and APIs
- Hibernate and Spring frameworks
- Service-oriented architecture (SOA)
- Development environments
- Visual Studio Code, Eclipse, IntelliJ IDEs
- Testing frameworks
- Git version control system
- AWS cloud services

EDUCATION

Master of Science

Information Systems
University of The Cumberland,
Williamsburg, KY
May 2025

Bachelor of Science

Information Systems
University of Texas At Arlington,
Arlington
May 2020

AWARDS

- Microsoft Imagine Cup 2015 (National Winner)
- Microsoft Imagine Cup 2016 (National First Runner Up)
- NASA Space Apps Challenge 2016 Global Recognition
- EARTHxHack 2018 (Dallas Challenge Winner)

- Built secure backend services supporting financial transaction workflows with strict data integrity and compliance requirements.
- Integrated wallet flows into front-end applications using React.js and Redux, facilitating seamless blockchain transactions.
- Architected end-to-end decentralized systems, encompassing smart contract deployment and front-end wallet interactions.

Full Stack Developer

Ally Bank | Charlotte, NC | September 2021 - August 2022

- Designed and developed RESTful APIs using Java (Spring Boot) and Kotlin, enhancing backend services for improved data processing speed.
- Utilized Serverless framework to deploy applications on AWS Lambda, optimizing resource allocation and reducing infrastructure costs.
- Leveraged AWS Step Functions to orchestrate workflows across Lambda functions, ensuring reliability for critical banking operations.
- Implemented secure authentication mechanisms with CIAM tokens and OAuth 2.0, safeguarding sensitive customer data and API access.
- Stored user flow data in Amazon DynamoDB, ensuring resilience and availability during system failures.
- Collaborated with cross-functional teams to align architecture standards and adhere to best practices in API development.
- Developed systems with audit logging and traceability for regulatory compliance.
- Contributed to migration of Java Spring Boot applications to Node.js, enhancing performance through asynchronous processing.
- Refactored Java code to Kotlin, improving readability and reducing service class size with Kotlin's features.

Full Stack Developer

Bose | Framingham, MA | May 2020 - August 2021

- Designed and developed RESTful APIs with Java (Spring Boot) and Kotlin to meet project requirements.
- Created dynamic web pages utilizing HTML5, CSS3, React, Bootstrap, JSON, and Ajax for responsive interfaces.
- Automated build and deployment pipelines using Jenkins, Shell scripting, Chef, Python, AWS Lambda, and CloudFormation.
- Implemented OAuth 2.0 for secure single sign-on integration with identity providers such as Google and Facebook.
- Developed data models with Hibernate POJOs and configured persistence layers for relational databases.
- Built on-premises data pipelines using Apache Kafka and Spark Streaming for real-time data processing.
- Conducted unit testing with JUnit and Mockito to ensure application functionality.
- Deployed applications to Tomcat and WebSphere utilizing Kotlin-based configurations for efficiency.

Full Stack Java Developer

Goldman Sachs | New York, NY | December 2018 - April 2020

- Designed and developed microservices using Spring Boot and enhanced front-end functionality with JavaScript and React.
- Built independent services with Tomcat embedded containers, incorporating Swagger for API documentation.
- Implemented Spring Security for authentication and method-level authorization.
- Managed build processes and dependency management using Maven, creating pre/post-install scripts with RPM.
- Utilized Git, Bitbucket, Artifactory, Jenkins, and Git Bash for source code management and CI/CD workflows.
- Migrated a legacy Spring web application to Spring Boot, localizing environment properties in YAML.

- Automated deployment processes and customized Maven scripts to streamline operations.
- Deployed services on AWS and facilitated database replication within the cloud environment.

Java Developer

Texas AMN Healthcare | Coppell, TX | September 2017 - October 2018

- Conducted comprehensive analysis, design, implementation, and deployment across full software development life cycle (SDLC).
- Designed user interfaces utilizing JSP, HTML, and JavaScript for enhanced user experience.
- Developed core Java systems leveraging Collections and multithreading for improved performance.
- Utilized Spring MVC to develop robust web-based applications.
- Defined search criteria to extract and update customer records in the database efficiently.
- Implemented JavaScript validations for user registration and login screens to enhance data integrity.
- Created Angular components with JavaScript, employing directives, filters, and services for dynamic functionality.
- Authored build and deployment scripts using Gradle to customize WAR and EAR files.