

Kumar Abhishek

Principal Software Engineer

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SUMMARY

Seasoned software architect with over 20 years of experience in product development and distributed systems. Currently, working at Jumpcloud as a Principal Software Engineer, specializing in architecting and building scalable APIs and services for Identity, Authentication and Access products. I am proficient in full-stack development (Golang, Python, Node.js, Java, React, Javascript), cloud-native application on AWS, and leading cross-functional teams.

EXPERIENCE

Principal Software Engineer

Jumpcloud | Bengaluru | 04/2025 - Present

Building Identity, auth and access products supporting SSO, OIDC, SAML for Jummpcloud product and services.

- Building features and capabilities for authentication and access control including Conditional Access Policy for SSO Applications, User Console and Admintrator console.
 - Solving customer issues in collaboration with product team to groom features gaps and ask as continuous Engineering deliverables.
 - Maintainer and contributor of multiple repositories related to OIDC and API microservices.
 - Contributing to the long-term technical vision and strategic direction of the engineering team, identifying opportunities for innovation and improvement.
 - Tackling problems across the teams and serving as a technical leader on cross-functional projects
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Senior Computer Scientist II

Adobe | Bengaluru | 07/2022 - 03/2025

Pioneered technology solutions and architectural frameworks for Adobe's Firefly APIs, enhancing integration capabilities across flagship applications such as Photoshop, Illustrator, and Lightroom while improving service performance by 20-30% across platforms.

- Building scalable API and services for first-party Adobe flagship applications like Ps, Ai, Lr, etc and 3rd party enterprises for Firefly and GenAI capabilities.
- Leading team with architectural design for delivering milestones under organisational constraints and meeting OKR set by the executive leadership team.
- Built commercialisation and metering system for generative credits management of various spectrums of Firefly API consumers.
- Built text-to-image features including prompt processing, Imaging model selection, Style presets, etc in Firefly webapp utilising UI stack based on React, Javascript and Node.js.
- Guide and adopt technologies fit for the purpose including but not limited to Java, python, Golang, Node.js, etc in a distributed systems with horizontal scalability, avoiding single-point of failure, security and all aspects of production grade considerations.
- Prototyping and building solutions, features, POC, etc for experimentation and innovation to improve and enhance current products and capabilities, collaborating with cross-geo teams.

Principal Engineer

Bazaarvoice | Bengaluru | 03/2021 - 07/2022

Leading technical initiatives and compliance in ratings and reviews of product offerings.

- Representing India's technical leadership team for various product offerings and portfolios in ratings and reviews.
 - Driving non-functional requirements such as performance, security, portability and scalability.
 - Full-stack architecture, development, and maintenance of solutions using AWS, Google Apigee API Gateway, Cloudflare, etc.
 - A key leader in driving technological innovation and solving business problems for customer delight and retention.
 - Regulation & Compliance leadership at the organisation level for ePrivacy - CNIL & Web Accessibility - W3C WCAG.
 - Part of the technical leadership group for cross-functional initiatives.
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Architect

Cisco Systems | Bengaluru | 03/2013 - 03/2021

Architecting and developing cloud-based solutions for communication technologies.

- Design and development of Cloud-native application for Cisco Unified Communication Technology Group (UCTG).
 - Identifying non-functional requirements such as performance, security, portability and scalability of the application.
 - Full-stack architecture, development, and maintenance of solutions on AWS.
 - Represent technical leadership team for coordinating with product management and other stake holder for cloud based UCTG telemetry solutions.
 - Scrum, Kanban, Agile methodologies.
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Technical Lead

Eros International | Bengaluru | 09/2011 - 03/2013

Technical lead responsible for backend and frontend web application development.

- Overall backend development of web applications (ErosNow & ErosNow Analytics) including Nodejs, JavaScript, VARNISH, HAProxy, Stunnel, NginX, EC2, etc on AWS.
 - HTTPS - SSL Certificate, REST APIs for catalogue (Movies / Music videos / Short Content, etc.)
 - User/Session Management, Social Network Login.
 - Movie Subtitles, Online Subscription, Advertisement (Preroll, Companion, etc.)
 - Optimization & performance tuning for iPad & Internet Explorer browsers, Google Analytics.
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Lead Engineer

Samsung | Bengaluru | 06/2009 - 09/2011

Leading a team of application framework development for the SAMSUNG bada platform.

- Reviewing code changes, refactoring, and optimizing codebase as per requirement.
- Worked on the design & development of modules in the WebKit-based Samsung mobile browser.
- Solving critical issues related to rendering, mentoring & training newcomers.
- Received "Super Saver Award" for a contribution towards total cost reduction of mobiles by developing a WebKit-based web browser.

Senior Software Engineer

Yahoo! | Bengaluru | 05/2008 - 06/2009

Design & development of participation platform and user-generated content.

- Design & development of Yahoo alerts for scheduled notifications via Yahoo Messenger and Yahoo Mail.
- Contributing to the low-level design of component interfaces (C++ API) and deployment to the server.
- Integrating poller component with Mysql database farm for various Alert categories like Yahoo Stock, Yahoo Weather, Yahoo News, etc.
- Adding C++ unit tests to improve component quality by increasing code coverage and reducing cyclomatic complexity.
- Contributing to code review and unit tests of different components of the participation platform.

Software Engineer

Hewlett Packard | Bengaluru | 06/2005 - 05/2008

Development and maintenance of libIO library as part of System Networking and IO Lab (SNIL).

- Unit tests for APIs sanity checks supported by libIO on HP-UX 11i.
- Porting various thread-unsafe components of libIO using thread local storage(TLS).
- Contributing to the development of the Intelligent Platform Management Interface(IPMI) Tool in C++.

EDUCATION

M.S. in Software Systems

Birla Institute of Technology And Science | Pilani | 06/2007 - 06/2009

B.E. in Information Science and Engineering

R V College of Engineering | Bengaluru | 06/2001 - 06/2005

SKILLS

🔗 AI/ML:

Pytorch, Diffusion Model, Granularity & Nuances Control using Omegance

☁️ Cloud Services:

AWS, Docker, EKS(Kubernetes), Lambda, API Gateway, Route53, CDN(Cloudfront)

💻 Backend Development:

Java, Golang, Node.js, Python, JavaScript, PHP, C/C++

📱 Frontend Development:

React, HTML5, CSS3, JavaScript(ES6+), Progressive Web App(PWA), IndexedDB

🔗 APIs & Microservices:

REST, GraphQL, gRPC, Protobuf, WebSockets

🗄️ Databases:

AWS RDS(MySQL, PostgreSQL), MongoDB, DynamoDB, Redis, Elastic Search

🔗 Architecture Patterns:

Strangler, Backend for Frontend (BFF), API Gateway, Command Query Responsibility Segregation(CQRS), Priority Queue, Saga(Orchestration), Choreography

✂️ **Tools & Frameworks:**

Kafka, SNS, SQS, HAProxy, Nginx, Terraform, AWS CDK, Jenkins

🔒 **Security & Compliance:**

ePrivacy (CNIL), Web Accessibility (W3C WCAG)

🏗️ **Methodologies:**

Agile, Scrum, Kanban

🔧 **DevOps:**

Git, ArgoCD, Jenkins, HELM Chart, CI/CD(Git Actions)

CERTIFICATIONS

 Introduction to Large Language Models

Issued Feb 2025

 Generative AI: Introduction to Large Language Models

Issued Feb 2025

 Cloud Architecture: Advanced Concepts

Issued Feb 2022

 Go Essential Training

Issued Feb 2022

 Learning GraphQL

Issued Feb 2022

 Microservices: Asynchronous Messaging

Issued Feb 2022

KEY ACHIEVEMENTS

💎 **Reduced data transfer bandwidth by more than 50%.**

For a data pipeline project, the data transmitted from the client over REST API was replaced by custom rpc over websocket using protobuf encoded binary data in place of text-based JSON, there by reducing data transfer bandwidth by more than 50%.

💎 **Improved latency of microservices by 20 times and resource reduction of 10 times.**

Older JVM-based microservice was re-engineered in Go, thereby drastically cutting down on memory and CPU footprint and yet improving the latency manifold. It gave a big headroom for building more features to cater to business demand without adding any extra investment in computing.

LANGUAGES

English

Proficient



Hindi

Proficient



INTERESTS

 Technology Enthusiast

Checking out and learning new stuff in technology.

 Innovative Problem Solver

Hacking to try out something new.