Mayank Raj

Lead Member of Technical Staff, Security @ Salesforce, SaaS Founder

CERTIFIED kubernetes ADMINISTRATOR

AWS community builders

aws certified Solutions Architect Associate

aws certified Solutions Architect Professional

Software Engineer with extensive experience in designing and building high-performance AI/ML and Big Data products, as well as resilient, fault-tolerant cloud infrastructure. Regular conference speaker, trekking enthusiast, and violinist.

BigData │ AWS │ Graph Database │ System Architecture │ Distributed Systems │ Serverless Systems │ Tech Author

Creator & Maintainer of...

Apptale.io

ThePostRoster.com

JavaScript, NodeJS, Python

AWS, GCP, EC2, ECS, S3, Lambda, Redshift, Kinesis, API Gateway, CloudFormation etc

GrayLog, Sentry, CloudWatch, X-Ray

RDS, Postgresql, RedShift, DynamoDB
Neo4j, AWS Neptune, DGraph

Cost effective, Secure and Reliable Infrastructure Design, Serverless Architecture
Reproducible Infrastructure - CloudFormation, SAM, CDK
Docker, Git

Cryptographic key management, KMS best practices, cryptographic protocols and algorithms

Violinist, Trekking, Automated Drones, Custom Keyboard

Core Contributor to Firefox

Authoring book titled "Hands on AI Projects" with O'Reilly

Salesforce

Lead Member of Technical Staff   **March '22 - Present**

Salesforce is a leading cloud-based CRM platform that streamlines customer relationship management and business operations, and includes subsidiaries like Slack for team collaboration and Tableau for data visualization.

- **Role:** Founding engineering leader for the Key Management Service (KMS) team in India.
- Key Contributions:
  - Led efforts to **improve service availability from 99.99% to 99.999%.**
  - Developed benchmarking tools and caching layers, **boosting system throughput by over 42%** and **reducing cost-to-serve by 1.7x**
  - Contributed towards improving cost-to-serve, **saving ~$1.6M/Yr**
  - **Onboarded KMS to application mesh across 30+ data centers**, overseeing R&D, monitoring, resilience, disaster recovery and communication.
  - Supported the service with 12x7 on-call duties, managed various P0-P4 incidents, and drove RCAs across the organization.
- Additional Involvements:
  - Participated in global hackathons, reaching finals and serving as a judge and mentor at global Salesforce level.
  - Built an AR bot assisted by LLMs for Salesforce conferences, used by over 450 unique users across 4 conferences

Cactus Communications

Associate Director of Engineering (Principal Solutions Architect)   **July '20 - March '22**

Cactus is a technology company accelerating scientific advancement. With offices in London, Princeton, Singapore, Tokyo, and Mumbai; a workforce of over 3,000 experts.

- Scaled and led a team of 15+ across India and Denmark
- Bridged the gap between the business and tech; bootstrap projects from the idea stage to enterprise scale, oversaw hiring across verticals
- Architected BigData platform that **ingests over 1.5Tb/week** and **generates over 4.5Tb/week**. It **manages over ~250Tb** of data in the datalake.
- Designed and developed a pipeline to process data for a Machine Learning use case with **cumulative 24K vCPU, 48Tb Memory**. Generated over ~4.5Tb of data in under 2.5 hours at **1/5th the proposed cost from AWS Big Data Team.**
- Architected a truly serverless highly available API that orchestrates **~100K of long running requests with sub-second SLA**

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📞 +91 83693 39460

MayankRaj.com

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Apptale.io

Founder / Creator & Maintainer   **Publically released on Dec '20**

Sideproject grown out of personal need, now used to monitor services by many

- Designed architecture to offered as a SaaS at **1/15th the cost of competitors**
- Built to have monitoring **service orchestrated across all 51 AWS availability zones** for a truly highly available monitoring system
- API layer built with support for GraphQL & REST, global database via DynamoDB and payment & subscriptions via Stripe
- **Built with Amplify, CloudFormation, Appsync, API Gateway, DynamoDB, Lambda** and more

Cactus Communications

Solutions Architect   **May '18 - Jun '20**

- Reported to the CTO
- Designed and **developed a graph database** engine that **queries ~8Tb of raw data in under $30/query** with avg query time of 8 minutes
  - Benchmarked to **outperform Neo4j and AWS Neptune**, in cost and speed
  - **Collaborated with the AWS Neptune** team on benchmarking
- Designed and maintained the infrastructure of projects that achieved state-of-the-art scores in Natural language Detection & Correction, NLP and Vision
- Established best practices and guidelines for cloud operations across AWS, Azure, and GCP, and standardized infrastructure templates
- Reported and **worked with AWS S3 team** on fixing bug on prefix throughput
- Developed microservices spread across Windows and Linux

Senior Software Engineer   **Jul '16 - Apr '18**

- Built clickstream application with AWS Kinesis and Redshift. Designed to **ingest ~5M records/day**, operating at **under $9/day**.
- Designed daemon to **monitor** activities on **45+ web properties and 12+ servers**
- Developed Data Lake with Hot and Cold Storage layer to optimize for cost and data availability. Manages over **4Tb+ data, powering 120+ Dashboard** for BI
- Designed and built a service that connects any user on the same page, in real-time using web sockets. Service **scaled from 47 users to 2.7K in 36 minutes**.

Directi

Software Developer - Consultant   **May '16 - Jul '16**

- Designed and developed a full stack application to handle recruitments and track the candidate from the time they enter to the time they are hired
- Also handle walk-in candidates by generating their profiles on site

WorkAmp, AIESEC, Frapp.in, TCS, HamaraEvent...

Software Developer - Consultant   **Feb '14 - Apr '16**

Education

Bachelor in Technology, Computer - NMIMS University, Mumbai, India

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