



# Mayank Raj

SaaS Founder  
& Ass. Director of Engineering



I'm a solutions architect with extensive experience in not only building high performant products powered by AI/ML & Big Data, but also designing resilient and fault tolerant cloud infrastructure for it. I have architected products that can scale to handle 100x load within minutes and yet remain cost effective. I have also built a graph database engine to work with more than a billions of nodes and edges.

JavaScript | Python | AI | NLP | BigData | AWS | Graph Database | System Architecture | Distributed Systems  
Serverless Systems | CI/CD | Cloud Automation | Tech Author | Automated Drones

- JavaScript, NodeJS, Python
- AI, ML, NLP, PyTorch, TensorFlow, Pandas, Keras, TensorFlow.js, ML5.js, WebVR, Ar.js, Three.js
- 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
- Docker, Git, Logstash, Linux
- Cost effective, Secure and Reliable Infrastructure Design, Serverless Architecture
- Reproducible Infrastructure - CloudFormation, SAM, CDK
- Automated Drones, Ardupilot, PX4, Custom Keyboard, IoT
- Core Contributor to Firefox
- Authoring book titled "Hands on AI Projects" with O'Reilly

## Apptale.io

Founder & CTO Dec '20 - Present

- Apptae grew out from being a personal need to a side project now offered as a SaaS
- Built to have monitoring service orchestrated across all 51 AWS availability zones (datacenters) for a truely highly available monitoring system
- API layer built with support for GraphQL & REST, global database via DynamoDB and payment & subscriptions via Stripe

## Cactus Communications

Associate Director of Engineering July '20 - Present

Cactus Communications is a technology company accelerating scientific advancement. We offer AI-powered scholarly publishing solutions for journals and researchers.

We have offices in London, Princeton, Singapore, Beijing, Shanghai, Tokyo, Seoul, Aarhus, and Mumbai; a global workforce of over 3,000 experts; and customers from over 190 countries.

- Bootstrapping multiple products in the domain of AI/ML and BigData
- Lead a team of across India and Denmark
- Architected BigData platform that ingests over 1.5Tb of data and generates over 4.5Tb of data every week
- Architected a truely serverless highly available API that orchestrates over a million of long running requests with sub-second SLA
- Gap the bridge between the business and tech side; bootstrap projects from idea stage to enterprise scale

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Architecture  
Reproducible Infrastructure -  
CloudFormation, SAM, CDK

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Projects" with O'Reilly

## Cactus Communications

**Solutions Architect**

May '18 - Jun '20

- Report to the CTO
- Designed and developed a graph database engine to process over a billion nodes and hundreds of billions of edges in a cost effective manner
- Designed and maintained the infrastructure of projects that achieved state-of-the-art scores in various applications of language detection and correction, NLP and Vision
- Setup the best practices and implementation guidelines for the team to operate on Cloud, across AWS, Azure and GCP
- Managed team that grew from 1 to 16. Overall grew from 1 to >60

**Software developer**

Jul '16 - Apr '18

- Built a monitoring tool to monitor and track activities over various platforms
- Designed ETL pipelines to process over a million records on a daily basis to be ingested into AWS Redshift
- Designed Datalake with Hot and Cold Storage layer to optimize for cost and data availability
- Designed and built a service that allow users to communicate with anyone else on the same page using web sockets. Scaled the service 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
- Generate automated reports and email trigger

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

**Software Developer - Consultant**

Feb '14 - Apr '16

## Education

Bachelor in Technology, Computer - NMIMS University

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**MayankRaj.com**