

# Mridul Gupta

SOFTWARE ENGINEER · COMPUTER SCIENCE AND ENGINEERING MAJOR

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*“Focused backend engineer with expertise in micro-services architecture, distributed systems and system design. Can work well with teams and have experience owning end-to-end deliverables individually. Currently working as a Software Engineer for People Experience at Amazon, building next-generation workforce management products”*

## Everyday Tasks Include

### PRODUCT & BUSINESS

- Product requirement understanding and end-to-end solution design, development, and delivery.
- Support on production issues, following SLA guidelines.

### TECHNICAL

- Low level system design and implementation.
- Developing REST APIs, worker modules, managing/developing queuing and logging systems.
- Automation tasks like deployment scripts, database migration scripts, monitoring and alerting systems, etc.

### MANAGEMENT

- Mentor junior engineers.
- Code reviews and TDD.
- Conduct interview rounds for potential hires.

## Work Experience

### Amazon

Toronto, Canada

SOFTWARE ENGINEER

Jan. 2023 - present

We build and support time systems that pay employees accurately, and simplify workforce management. Our goal is to support every addressable Amazon employee in every country Amazon does business

### Zeta Suite, Directi

Bengaluru, India

SOFTWARE ENGINEER II - CIPHER

Jul. 2021 - Dec. 2022

- Build and optimized Zeta's entire security infrastructure, from Payment Security to Identity and Access Management
- Piloted initiatives to ensure end-to-end GDPR Compliance.
- Led an org-wide architectural change for an important security feature which prevents broken logout experiences.
- Implemented various features and platform enhancements for Cipher, notably a pub-sub “Logout All” feature and Time-based OTP Mechanism
- Tech used: **Java/Spring, Kafka, PostgreSQL, AWS, Kubernetes**

### Airtel X Labs

Gurugram, India

SOFTWARE ENGINEER - DIGITAL STORE AND AIRTEL IQ

Jun. 2019 - Jul. 2021

- Worked to build an intelligent micro-services layer to orchestrate bundle orders with rules around eligibility, payments, discounts and billing.
- Built a reconnaissance engine to manage subscription validity basis eligibility, directly **saving 10% reselling cost** every month in the process.
- Deployed a centralized monitoring environment (**Grafana, InfluxDB**) which gather system metrics as well as API run-time metrics.
- Implemented several API micro-services in **Java** to manage client workflows for Airtel IQ, which presently clocks **over 100 million** daily requests.

### The MathWorks Inc.

Bengaluru, India

SOFTWARE ENGINEER INTERN

May 2018 - Jul. 2018

- Iterated multiple **Perl** prototypes to empower developers in automating cross-platform prequalification tests for upcoming **MATLAB** SDK versions and toolboxes
- Participated in daily meetings to grasp P1 issues and shadowed full-time engineers during their work.
- Received recognition for discovering the most exploits among interns during a bug bash prior to the MATLAB R2018b release.

## Technical Skills

**Programming** Java, MATLAB, Python, Perl

**Technologies** Core Java, Spring Boot, Kubernetes, Web Services (RESTful and SOAP), Avro, Kafka, RabbitMQ, Jenkins, Elasticsearch, Git, Bash

**Frameworks** Spring Boot, Django, Flask

## Education

### IIIT (Indraprastha Institute of Information Technology)

New Delhi, India

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING

- Teaching assistant for **Linear Algebra** and **Introduction to Programming**

# Research & Projects

## Cloning Machine Intelligence

New Delhi, India

B.TECH THESIS UNDER THE GUIDANCE OF DR. DEBARKA SENGUPTA

- Dedicated to the exploration of intelligence hacking in machine learning models.
- Building data-less models based on classification boundary estimation
- Manuscript submitted to IEEE Access for publication. [Thesis Poster](#)

## Trimming the Fat

New Delhi, India

RESEARCH COURSE PROJECT WITH DR. RAJIV RATN SHAH

- Deep Learning Based in Videos. [Report Slides](#)
- Platform to analyze a video file or feed and allow the user to search for objects in it.
- Extended to recognize object color and specific people in the video
- Application built in **Flask** uses the YOLO model trained with the MS-COCO dataset to detect various objects in the image.

## Everybody Dance Now

New Delhi, India

RESEARCH COURSE PROJECT WITH DR. SAKET ANAND

- Implemented “do as I do” Motion Transfer using Generative Adversarial Networks (GANs)
- Work involved video-to-video translation using pose as an intermediate representation.

## Information Fusion of Location-based Services

New Delhi, India

INDEPENDENT RESEARCH PROJECT WITH DR. PONNURANGAM KUMARAGURU AND DR. ANKITA LIKHYANI, IBM RESEARCH

Orchestrated a long-term crawl on location-based online social networks (Foursquare, Uber, Yelp, Twitter) to generate user knowledge graphs.

# Honors & Awards

2021	<b>Best Team Award, Q4 2020-21</b> , Digital Enterprise Division, Airtel X Labs	Gurugram, India
2020	<b>Best Rookie Award, Q2 2020-21</b> , Digital Enterprise Division, Airtel X Labs	Gurugram, India
2020	<b>Best Team Award, Q1 2020-21</b> , Digital Enterprise Division, Airtel X Labs	Gurugram, India
2019	<b>Best Rookie Award, Q2 2019-20</b> , Digital Enterprise Division, Airtel X Labs	Gurugram, India
2017	<b>1st place, Technical Quiz</b> , Research Showcase, IIIT Delhi	New Delhi, India
2017	<b>7th place, Capture-the-Flag Contest</b> , Facebook DevC	New Delhi, India
2014	<b>Ignited Mind and Overall Proficiency Award</b> , Delhi Private School	Dubai, UAE
2013	<b>1st Place</b> , S P Jain Brain Triathlon UAE	Dubai, UAE

# Volunteer Experience

## Be My Eyes

Virtual

VOLUNTEER

June. 2021 - present

- Devoting part of my time to solve real world problems for blind and sight impaired people around the world.

## Indian Social Responsibility Network

New Delhi, India

SUMMER TRAINEE VOLUNTEER

May. 2019 - Jun. 2019

- Encourage NGOs to participate and facilitate a smooth onboarding on BSE Sammaan, a homegrown initiative to matchmake companies to NGOs for their Corporate Social Responsibility (CSR) initiatives.
- Develop media content on themes based on CSR field reports.

## Indraprastha Institute of Information Technology

New Delhi, India

SECRETARY, STUDENT SENATE

Apr. 2017 - May. 2018

Served as Secretary of The Student Senate, an elected body which serves as a representative for undergraduate and postgraduate students. at IIIT-Delhi with the following objectives.

- Participated and served as a representative of the students in Academic Policy Making.
- Conducted meetings with the present students regarding grievances and discussion on current academic affairs.
- Organized growth programs involving students and alumni, including student counseling, higher education, etc.

COORDINATOR, THE 65<sup>TH</sup> SQUARE

Sept. 2015 - Apr. 2019

The 65<sup>th</sup> Square is the Chess Club of IIIT-Delhi.

- Organized the college's annual Chess Tournament three years in a row.
- Participation - 500+ school/college students and 50+ FIDE Rated players.
- Organized 50+ chess tutorials and practice matches for 75+ students.