

JAYENDRA KUMAR

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EDUCATION

Bachelor of Technology

(Double Major)

IIT Kanpur

Major in **Electrical Engineering**

Second Major in Mechanical Engineering

Minor in **Machine Learning & Applications**

Minor in **Algorithms**

Jul 2014 - Jun 2019

WORK EXPERIENCE

Member of Technical Staff - III, Nutanix

Jul 2023 - Present

Nutanix, Bengaluru (initially Pune)

- Back-end developer in the R&D - DR & Backup team of Nutanix DR services: a software-driven solution for Disaster Recovery providing flexible RPO and RTO options on-prem and in the cloud datacenters.
- Work:
 - Feature development related to core DR workflows(for instance, Async replication). This includes the development of new RPCs as required.
 - Active work also includes the end-to-end development of new v4 APIs.
 - Providing support on different frameworks and components owned by our team. Delivering fixes under constraints while honoring SLAs for any new issues.
 - Also provided support for Py2-Py3 migration for the codebase of the entire team.
- Technology used: C++, Python, Java, Go, gRPC, Cassandra, Zookeeper.
- Featured Projects:
 - Bulk delete feature for all recovery points of an entity. The major challenge was the scale of the operation as recovery points for a single entity could easily be accumulated in order of 10Ks on each cluster over the years.
 - Rate Limiter middle-ware between our replication service and the database service(for all the metadata across all the products) on the cluster. The rate limiter is essential in times of crunch when essential services are starving for resources (like at times of rolling cluster upgrade).
 - File resolution for applying CRT/CBT between a file in a recovery point and the source disk in case of ESXi VMs when end-user/ third-party operation is taking snapshots from both ESXi(from VMware) and AHV(from Nutanix).
- Leadership initiatives:
 - Contributed as part of Tiger Team(a specialized, cross-functional team composed of members from a few different teams) for the entire organization on Py2-Py3 migration support.
 - Supervised an intern undergoing 6 months internship from Jan'24 to Jun'24.
 - Supervising an intern undergoing 6 months internship from Aug'24

Software Development Engineer - II, Amazon

Sep 2021 - Aug 2022

Amazon Development Center, Bengaluru

- Part of ProductCX team of Buying Experience organisation which owns product evaluation features on the product Display Page of Amazon Retail Website.
- Work:
 - Design and development of code flow/technology for new and alternate features; and experimenting on existing features, for instance, deduplication of data displayed across multiple features, using A/B testing strategies.
 - Maintaining existing features and redesigning them to move towards simplicity and improve operability.
- Technology used: Java, AWS services(EMR, EC2, Lambda, S3, DynamoDB), Nexus, Hive and proprietary.
- Featured Projects:
 - 'Featured Bullet' de-duplication from repeated info in the 'title', 'product details', and 'description' features present on the product display page. The major challenge was that being an ATF feature, it could not use real-time ML model output due to latency. Further, the info contents are transient as retailers update them, and both the info shown on the page and the de-duplication preference differ with country and device type.

Member of Technical Staff - II, VMware

Jul 2019 - Aug 2021

VMware, Bengaluru

- Back-end developer in the Migration team of VMware HCX: an application mobility platform designed for simplifying application migration, re-balancing workloads, and optimizing disaster recovery across data centers and cloud.
- Work: New feature development and code maintenance for HCX migration workflows.
- Technology used: Java, maven, MongoDB, Kafka, Zookeeper, Git, vSphere, VMC (VMware Cloud on AWS)
- Featured Projects:
 - Seed Support for replication disk while performing Bulk or RAV migrations. This feature allows you to continue replication from already copied data if replication was not complete during previous attempts. This added the complexity of maintaining all the affected folders(which could differ between subsequent attempts) for their cleanup after seed support.
- Ownership: Bulk (vSphere Replication) migration and RAV (Replication Assisted vMotion) migration services.
- Leadership initiatives:
 - Supervised an intern undergoing 6 months internship from Jan'21 to Jul'21.
 - Conducted knowledge transfer sessions for all new hires in team from May'20 to Aug'21.

Machine Learning Intern

May 2018 - Jul 2018

Camp K12 (an ed-tech firm), Gurugram

- Research on NLP and Computer-vision solutions to improve the firm's product offerings, better target consumers.
- Designed and deployed an RNN based auto-tagger for the firm's mentor-match program and an auto-tagger for firm's Ethereum-queries forum.

LANGUAGES AND RELEVANT COURSEWORK

C, C++, Python, Java

Data Structures & Algorithms, Algorithms - II, Parallel Algorithms, Intro to Machine Learning, Intro to NLP

RELEVANT PROJECTS

Click-baits and Fake news detection for filtering Feeds

Sep 2022 - Jun 2023

Exploratory project

- This project was on the financial viability of the concept as a product. The potential product has two major parts:
 - Clickbait scoring based on feed title and actual value of content using NLP models and techniques.
 - Knowledge Universe mapping and verification chain to the source. This part also has an underlying assumption that the POC developed here will adhere to the general scaling laws of language models.

Visual Question Answering

Jan 2018 - Apr 2018

Academic project: Natural Language Processing

- A Machine learning group project for answering questions based on a shown image. It compared three models: a Joint embedding model with Attention on the image, a Bayesian model, and a generative deep-Bayesian model.

An Efficient Full-frame Video Stabilization based on Feature Matching

Jan 2018 - Apr 2018

Academic project: Modeling and Representation techniques for Images

- A project utilizing feature matching technique instead of mainstream optical flow technique for video stabilization. It included algorithms for feature-based motion estimation, motion smoothing, and image composition.

OTHER SCHOLASTIC ACHIEVEMENTS AND POSITIONS OF RESPONSIBILITY

Secured **All India Rank 06** in NIFT B. ftech. entrance exam.

2014

Coordinator, Creative Cell, Show Management, 51st Inter-IIT Sports Meet

2016

Executive Design, Cultural Council, Student Gymkhana, IIT Kanpur

2015-2016

Webmaster, Cultural Council, Student Gymkhana, IIT Kanpur

2015-2016