

Divyanshu Raj

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I am a full-stack software developer at Amazon's Brand Experience and Excellence (BEE) Organization. I build and scale web applications using front-end frameworks like React, and Redux, and backend technologies like Java and Python with AWS.

WORK EXPERIENCE

Amazon.com | Software Developer | Tempe, USA

May'24 - Present

- Played a key role in launching **Customized Audience Builder (CAB)**, a feature that enables brands to target specific audience segments (e.g., cart abandoners) with customized promotions, increasing engagement and conversion rates.
- Developed front-end using React, Redux, JavaScript, and Katal, ensuring a smooth and responsive user experience.
- Built and maintained backend systems in Java, utilizing AWS cloud services, using CloudFormation stacks in JavaScript, and integrated GraphQL (Datapath) APIs for scalable infrastructure. Also including Cradle, OpenSearch, and Andes.
- Collaborated across teams to ensure high performance and seamless integration of front-end and back-end services.
- Performed multiple system audits as per Amazon standards and contributed to making them compliant.

Amazon.com | Software Development Engineer Intern | Tempe, USA

May'23 - Aug'23

- Designed Auto Reply feature for Brand Customer Reviews (BCR) with AWS, which led to a **monthly cost savings of exceeding \$100k** for over 1000+ customers for e-commerce Retail business.
- Reduced OpenSearch query latency from 200ms to just 2ms. Successfully orchestrated the migration of the BCR architecture with data freeze on AWS SQS during downtime across all regions as part of the intern project.

Streamoid Technologies | Software Developer | Bangalore, India

Jul'17 - Aug'22

- Engineered a **full-stack automated system** for training and deploying Transformers models on GCP/AWS. This system accelerates experimentation and training, specifically for text-based models such as classification and NER. [\[Blog\]](#)
- Designed and implemented a real-time, event-driven data processing pipeline for client data extraction of metadata. Utilizing a push-based architecture, achieved a **20% performance boost** and **reduced cloud costs by 40%**. [\[Blog\]](#)

RESEARCH EXPERIENCE

Publications

- Paper Accepted at **IROS 2024: Learning Temporally Composable Task Segmentations with Language**, showing, multiple behavior cloning policies that learn behaviors based on a language-conditioned high-dimensional change-point detection method outperform long-horizon policy learning approaches in achieving goals, by higher success rates on rollouts and improved sample efficiency. Published a dataset with 10,000 demonstrations using RLbench. [\[Results\]](#)[\[Blog\]](#)
- Paper Accepted at **RSS 2023 Workshop: Utilizing Language for Robot Learning: Language-Conditioned Change-Point Detection** showing a novel approach for **identifying sub-tasks in robotics domains by leveraging natural language instructions** to map long trajectories to smaller trajectory fragments, achieving a significant improvement over baseline methods through extensive experimentation using a modified version of ALFRED dataset. [\[Paper\]](#)
- Vast experience with designing and performing experimentations using Large language models as part of research labs.

EDUCATION

Master of Science, Computer Science
Arizona State University, Tempe (USA)

Aug'22 - May'24

Bachelor of Technology, Information Technology
Indian Institute of Information Technology, India

Jul'13 - Jun'17

ACTIVITIES & ACHIEVEMENTS

- Writer for **"Towards Data Science"** and **"Analytics Vidhya"** on medium. Several articles have been published with them.
- All India ranked **193** in the **ACM ICPC 2014** competitive coding competition, Asia, Amritapuri site online round.
- **Teaching assistant** in "Perception in Robotics" Grad course, and "Data Structures and Algorithms" Undergraduate course.

SKILLS

- **Databases:** MongoDB, MySQL, Postgres, Redis, Amazon DynamoDB, Google Datastore, Solr, Elasticsearch, OpenSearch
- **Programming Languages:** Java, JavaScript, React, Redux, Python, R, Pyspark, C++, Scala, Node.js, Android SDK, SQL
- **DevOps:** Docker, Kubernetes, CDN, Amazon EKS, Google KS, Google Cloud Run, Amazon Lambda
- **Message Brokers:** Kafka, RabbitMQ, Google Pub-Sub, Amazon Firehose, Amazon SQS, Amazon SNS, Spark, Airflow
- **Architectural Patterns:** Microservices Architecture, Event-Driven Architecture, Amazon CICD