

ABHISHEK RAJGARIA

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EDUCATION

University of Utah

Master of Science, Computer Science, GPA: 3.9/4.0

Salt Lake City, Utah, USA

Aug 2023 - Dec 2024

Indraprastha Institute of Information Technology Delhi (IIITD)

BTech, Computer Science with Applied Mathematics, GPA: 8.72/10, with Honors

Delhi, India

Aug 2017 - Jun 2021

Relevant Courseswork - Graduate Algorithms, Natural Language Processing, Deep learning, Big Data, Machine Learning, Reinforcement & Artificial Learning, Computer Vision, Computer Architecture, Operating System, Object-Oriented Prog.

SKILLS

Programming: Python, Java, C++, C#, JavaScript, TypeScript, Go, NodeJS, HTML, CSS, SQL

Frameworks - Tools: Pytorch, Tensorflow, Spring, AWS, .NET, React, Redux, GraphQL, Kafka, Spark, PostgreSQL, MongoDB, Redis, Figma, Storybook, Docker, Kubernetes, Jenkins, Terraform, Elasticsearch, Beautiful-Soup, Git, Linux, R.

PROJECTS

Visual Question Answering - VQA-v2 ([Code](#))

Nov 2023 - Dec 2023

- Fine tuned **BERT**, **ResNet**, **Vision-Language Transformer** models, obtained Accuracy of 53.2% and F1-score of 21.0%
- Converted VQA task to classification task (1000 classes), performed inference based on 7-Question and 3-Answer type.

Character level Language Model ([Code](#))

Oct 2023 - Nov 2023

- Developed a 2-layer **LSTM** based Language Model with $\approx 10M$ params, learned character level embedding from scratch.
- Applied **Teacher Forcing** during training, evaluation metric (**Perplexity**), **Generated text** without teacher forcing

Subgraph Isomorphism using Graph Neural Networks ([B.Tech Thesis](#))

Jan 2020 - Jun 2021

- Proposed novel attention **Graph pooling** and **Interactive context** layer, applied **CNN** and **Neural Tensor Network**
- Attained upto **10%** improvement from state of the art models on datasets varying in domain, size and density.

Quantum Computing & Linear Algebra project: QAOA Experiments ([Report](#))

Jan 2021 - May 2021

- Formulated a new **Objective Hamiltonian** for maximum matching problem using the **Lagrangian** method.
- Designed various **quantum circuits** (upto depth $p = 3$) for **Maximum matching** and **MaxCut** graph problems.

WORK EXPERIENCE

Research Intern, Midas Labs, IIIT-Delhi | OCR Error Correction in Legal Docs, [Case.law](#)

Sep 2022 - Feb 2023

- Extracted unmarked citations using Named entity recognition (NER) and regex matching from **7M** documents (OCR model missed $\sim 15-16\%$ citations). Indexed metadata on **Elasticsearch**. (performed on 42-core machine)
- Applied **Multi-processing** for querying missing citations (**100x** speed up from Pandas), achieved 60% rectification.

Associate Software Development Engineer, Publicis Sapient, Gurugram

Aug 2022 - Aug 2023

- **NeoBank Platform** | Spring, GraphQL, Kafka, Offset Explorer, Object Oriented Prog., MongoDB
 - * Created **Invoicing** and **Customer Onboarding** service, Incorporated **backend-for-frontend** for GraphQL interface.
 - * Used Kafka events for **asynchronous** messaging, written unit, E2E tests and led the integration testing.
- **Teaching Strategies Platform** | .NET, C#, Visual Studio, NUnit, GraphQL, Husky, Docker, Figma
 - * Built an application for student onboarding and monitoring (**in Micro-service arch.**), to be used by **1000+** schools.
 - * Utilized GraphQL for API communication, handled **caching** through apollo-client, added **localization** for 2 Language
- **Vehicle Ecommerce Platform** | React, Redux, Spring, AWS, Docker, Terraform, Jenkins
 - * Designed **Filter & Comparison** page, developed **Rest-APIs**, encrypted **Personal Identifiable Information**.
 - * Deployed using AWS and Terraform, configured **Green-Blue strategy** for 90+% up time for new version deployment

AWARDS

Dean's Award at IIIT-Delhi & Scholarship from Delhi Govt. for the **two consecutive year**, 2020 & 2021

EXTRA-CURRICULAR

Teaching Assistant: UoU - Software Practices, IIIT - Data Structure & Algo. and Information Retrieval,
Student Senate member ([Certificate](#)), Completed **80-hour Yoga Workshop**.([Certificate](#))([Video](#))