

# Nishant Rajadhyaksha

✉ rajadhyakshanishant@gmail.com | 🌐 <https://nishant42491.github.io/>

Research Interests: Generative Modelling, Geometric Data Processing.

## EDUCATION

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**K.J Somaiya College of Engineering**

2020-2024

B. Tech Computer Engineering GPA: 9.51/10 (6<sup>th</sup> Sem)

## PUBLICATIONS/PRE-PRINTS

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1. **Dif-GSR: Diffusion-based Graph Super-resolution with Applications - to Connectomics.**

[\[code\]](#)[\[paper\]](#)

*Nishant Rajadhyaksha, Dr. Islem Rekik.*

*PRIME-MICCAI 2023*

2. **Graph Contrastive Learning for Multi-Omics Data**

[\[code\]](#)[\[paper\]](#)

*Nishant Rajadhyaksha, Aarushi Chitkara.*

*Arxiv(Pre-print)*

3. **A Graphical Approach For Brain Haemorrhage Segmentation**

[\[code\]](#)[\[paper\]](#)

*Dr. Ninad Mehendale, Pragya Gupta, Nishant Rajadhyaksha, Ansh Dagha, Aditi Paretkar,*

*Tanmay Mishra, Mihir Hundiwalla, Sakshi Chavan.*

*Arxiv(Pre-print)*

4. **TLA: Twitter Linguistic Analysis**

[\[code\]](#)[\[paper\]](#)

*Tushar Sarkar, Nishant Rajadhyaksha*

*International Journal of Computer Sciences and Engineering, 2021*

5. **Modelling Veracity of Football Player Trade Rumours on Twitter Using Naive Bayes – Algorithm**

[\[paper\]](#)

*Nishant Rajadhyaksha*

*2021 International Conference on Artificial Intelligence and Machine Vision (AIMV)*

## RESEARCH/WORK EXPERIENCE

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**Visiting Researcher - Richardson Labs, Queens University**

June 2023 - Present

*Advisor: Dr Kathryn Tryshkin, Dr Neil Renwick*

*Kingston, Ontario Canada*

- Received the MITACS-Globalinks Scholarship to work on a project - relating to cancer genomics and graph neural networks.
- Modelling cancerous RNA molecular target networks as bipartite graphs.
- Identifying the most important RNA molecules by using explanations - produced by GNNExplainer.

**Research Intern – Basira Labs**

January 2023 – June 2023

*Advisor: Dr. Islem Rekik (Imperial College London)*

*Basira labs, Imperial College London*

- Proposed a novel Diffusion-based approach for super-resolving connectomes.
- Beats previous SOTA for brain graph super-resolution.
- Accepted as a PRIME workshop paper at MICCAI 2023
- Will be Published in PRIME 2023 Springer LNCS Proceedings.

**Integrating remote sensing with deep learning.**

April 2022 – May 2023

*Guide: Prof. Mansi Kambli (KJSCE)*

*KJSCE, Mumbai*

- Used Pytorch-Geometric to develop a segmentation algorithm to - segment sugarcane crops in remote sensing data.

### **NLP/Python Developer - Mettler Toldeo**

*Guide: Chetan Dhawan (Business Developer-Mettler Toledo)*

January 2022 – June 2022

*Mettler Toledo, Mumbai*

- Used NLP algorithms to finetune Microsoft's LayoutLMv2 to extract - relevant information from invoices.
- Developed different Python programs to automate tasks relating to - database retrievals.

### **Backend Developer - Aloyt**

*Guide: Kunal Dixit – (Developer Aloyt)*

April 2021 – June 2021

*Aloyt, Mumbai*

- Worked on creating a robust backend for a website using Django.

## **HONORS AND AWARDS**

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- Received the MITACS Globalink award. (2023)
  - Received funding to perform research at a Canadian university.
  - Funding of \$15000 to pursue graduate studies at a recognized - Canadian university.
- Kaggle Notebooks Expert (2022)
  - Highest Global Rank: 1805 out of 3,01,064

## **POSITIONS OF RESPONSIBILITY**

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- **Head** - DataZen (Data Science Council of Somaiya Vidyavihar University) (2022-2023)
  - Served a student body of around 40,000 students.
  - Conducted various workshops with a research-based theme.
- **Technical Team** - DataZen (2021-2022)
  - Helped with organising the technical aspects of workshops.
  - Handle any technical queries posed by the student body.
- **Technical Team** - CSI (Computer Society of India KJSCE chapter) (2021-2022)
  - Conducted the regional selections for the Smart India Hackathon(SIH).
  - Was responsible for conducting technical workshops.

## **TECHNICAL SKILLS**

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<b>Languages</b>	Python, C++, C, Java, HTML/CSS SQL
<b>Tools and Libraries</b>	PyTorch, torch-geometric, OpenCV, Git, LATEX, Django

## **BLOG**

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**Title:** A Gentle Introduction To Graph Spectral Filtering

[\[blog\]](#)

**Author:** Nishant Rajadhyaksha

**Publisher:** Medium

## **EXTRACURRICULAR ACTIVITIES**

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- Represented KJ. Somaiya College of Engineering's football team for the years 2022 and 2023.
- Participated in Thane Division Football Association – 1<sup>st</sup> Division Football (7<sup>th</sup> tier of Indian Football Pyramid.) for Envision F.A