

# Leo Raphael Rodrigues

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## Education

### **Undergraduate - National Institute of Technology, Rourkela (NIT-R)**

**Graduation Date: May 2023**

B.Tech. in Computer Science and Engineering | **GPA: 7.93/10**

Relevant Courses: Machine Learning, Transformer Architecture, Neural Networks, Natural Language Processing, Data Warehousing and Mining, Artificial Intelligence, Algorithms and Data Structures

### **Intermediate - Abu Dhabi Indian School, Abu Dhabi, United Arab Emirates**

**Graduation Date: May 2019**

Senior Secondary Education, CBSE | **Percentage: 93.6%**

### **Matriculation - Abu Dhabi Indian School, Abu Dhabi, United Arab Emirates**

**Graduation Date: May 2017**

Higher Education, CBSE | **CGPA: 9.6/10**

## Work And Research Experience

### **Software Engineer | GEP**

Jun. 2023 - Jul. 2025

#### **Developing Software Solutions, GEP**

*.NET Core, C, Angular, MongoDB, Python*

- Developing robust software solutions at GEP, leveraging .NET Core for back-end services and Angular for dynamic, user-friendly front-end applications.
- Focused on creating scalable, efficient, and innovative systems to address complex business challenges. I also worked on scalable and efficient integration of AI solutions like recommender systems into the software.
- Delivered AI-integrated supply chain and procurement solutions to more than 50 clients across the world aiding them in saving millions of dollars during procurement.

### **Undergraduate Researcher**

Jul. 2023 - Aug. 2023

#### **WMT 2023**

*Python, Fairseq, Bash, Linux*

- Actively participated in the WMT (Workshop on Machine Translation) 2023 competition, showcasing expertise in machine translation algorithms, and contributing to the advancement of language technology on a global stage.
- Involved working on the translation for four Indic languages with small datasets (low resource languages).
- Got respectable scores in all languages in the competition.

### **Undergraduate Researcher**

Dec. 2022 - April. 2023

#### **Dataset Filtration to Improve Model (NMT) Performance**

*Python, Fairseq, Bash, Linux*

- Worked on developing and evaluating dataset filtration techniques to enhance Neural Machine Translation (NMT) quality by selectively curating training data for improved model performance.
- Evaluated three different methods, including a novel method with promising results.
- [Link to work](#)

### **Undergraduate Researcher**

Aug. 2022 - Dec. 2022

#### **Neural Machine Translation and Backtranslation in Indic Languages**

*Python, Fairseq, Bash, Linux*

- Worked on investigating the efficacy of back-translation as a strategy in improving Neural Machine Translation (NMT) for Indic languages.
- Tested the implementation with 15 Indic languages to find out which languages perform better and why.
- Paid special attention to languages with smaller datasets.
- Achieved 100% increase in translation quality in more than five languages using the above method.

## Projects and Other Experience

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### **SWE Intern (GEP)**

May. 2022 - Jul. 2022

**Intern of Technology at GEP**    *Angular, Plugin Architecture, MongoDB, Javascript, Typescript, HTML, CSS, Git, Github*

- Summer internship at GEP where I worked on developing a new page for a client-specific request on GEP's website NEXXE.
- Worked with primarily front-end technologies

### **Winner of GEP Techathon**

Aug. 2022

**Project for creating a Graphical Password Interface**

*JavaScript, HTML, CSS, Git, MongoDB, Python*

- Developed a graphical password interface with multiple methods of setting a graphical password.
- Used SHA-256 encryption to ensure that passwords are safely stored in the database.

## Leadership and Extracurricular Activities

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### **GEP Extracurriculars**

2021 - 2022

***FUN Team, GEP Smash***

- Part of the GEP Fun Team, organizing events in the office space.
- Semi-finalist in the company-wide table tennis tournament.

### **Degree361**

2021 - 2022

***Editor-in-Chief***

- Led a team of writers, designers, and artists to curate an edition of the college magazine and promote writing in the college
- Orchestrating writing workshops, and giving students a platform to express their creativity in literary or artistic work.

### **TEDxNITRourkela**

2020 - 2021

***Associate Chief Curator***

- Led a team to organize the TEDxNITRourkela Event
- Involved in inviting speakers, curating their speeches, and timelining of event from start to finish.

### **College Basketball**

2019 - 2020

***Team Member***

- Played college-level basketball at national-level tournaments like the Inter-NIT Basketball Tournament hosted in NIT-Surathkal 2020.

## Skills

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### **Languages:**

English, Hindi, Konkani (Native), Arabic, French

### **Technologies & Tools:**

.NET Core, .NET Applications, Angular, Git, Linux, C#, Javascript, Python, C++, MySQL, HTML, CSS, Bash, Typescript, mongoDB querying