

# Abinash Maharana

github.com/ablnash  
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## Interests

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I am an undergraduate student majoring in Computer Science, and I love developing solutions for real-world problems with the help of Computer Science and Mathematics. Currently, I am studying and trying to apply concepts from Data Mining, Machine Learning, and Quantum Computing to solve problems on the topic of Temporal Knowledge Graphs. My experience arises from the various courses and research work that I completed at IIIT Hyderabad. Given the opportunity, I would love to pursue research as a Ph.D. student.

## Education

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<b>International Institute of Information Technology, Hyderabad</b>	Jul. 2018 – Jul. 2023
<i>B.Tech + MS by Research in Computer Science and Engineering (Dual Degree)</i>	<i>CGPA: 8.18/10</i>

## Research Experience

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<b>Link Forecasting in Temporal Knowledge Graphs</b>	Aug. 2022 – Present
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*Advisors: Dr. Rage Uday Kiran, Dr. P. Krishna Reddy*

- Working on the problem of link forecasting in Temporal Knowledge Graphs
- Proposed a framework which uses ‘Relaxed Temporal Random Walks’ and ‘Link-Star rules’ for improved link forecasting
- Accepted for publication at PAKDD 2023 as a full research paper

<b>Human-in-the-Loop Tensor Completion</b>	May 2022 – Jul. 2023
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*Advisors: Dr. Rage Uday Kiran, Dr. P. Krishna Reddy*

- Tackling the problem of missing pixels in satellite images using Tensor Completion
- Introduced the concept of Human-in-the-Loop in the objective function for Coupled Matrix Tensor Factorization

<b>Multi-Location visibility using coverage patterns</b>	Jan. 2021 – Feb. 2022
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*Advisor: Dr. P. Krishna Reddy*

- Worked on the problem of maximizing the visibility of a target object in the presence of obstacles
- Studied the problem of maximum coverage, and an interesting solution to it using transactional pattern mining

## Academic Referees

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### Dr. P. Krishna Reddy

- Professor, IIIT Hyderabad, India
- email: pkreddy@iiit.ac.in
- Data Sciences and Analytics Centre, IIIT Hyderabad

### Dr. Rage Uday Kiran

- Associate Professor, The University of Aizu, Japan
- email: udayrage@u-aizu.ac.jp
- Department of Computer Science and Engineering/Division of Information Systems, The University of Aizu, Japan

## Academic Experience

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### Teaching Assistant

Aug. 2022 – Dec. 2022

#### Course: Data Analytics 1

- Assisting the professor with the preparation of coursework, slides, assignments and quizzes as well as evaluating them
- Preparing assignments on topics in Data Mining, Machine Learning, and Database Systems

### Teaching Assistant

Jan. 2022 – May 2022

#### Course: Music, Mind, and Technology

- Assisting the professor with the preparation of coursework, slides, assignments and quizzes as well as evaluating them
- Finding relevant research work to prepare foundations for term projects

## Awards & Honors

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### Deans List 3

Monsoon 2021-22

Academic award for being in the top 15% in the class

IIIT Hyderabad

### Merit List

Spring 2020-21

Academic award for being in the top 30% in the class

IIIT Hyderabad

## Relevant Courses

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**Data Analytics:** Machine, Data, and Learning, Data Analytics-1, Data Systems, Data and Applications, Computer Vision, Statistical Methods in AI, Data Foundation Systems

**Mathematics:** Linear Algebra, Discrete Structures, Real Analysis, Probability and Statistics, Optimization Methods, Introduction to Quantum Information and Computation

**Core Computer Science:** Computer Programming, Data Structures and Algorithms, Algorithm Analysis and Design, Automata Theory, Computer Networks, Introduction to Information Security

## Technical Skills

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**Programming Languages:** C, C++, Python, Javascript

**Python toolkits:** scikit-learn, OpenCV, GDAL, GIS systems, numpy, pandas

**Full-stack tools:** Node, Redis, React, MySQL, Mongo, PHP

I have completed at least one or more **real-world** projects in which the above mentioned languages/technologies were involved. Additionally, I have used Python extensively for research work for more than two years.

## Professional Experience

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### Software Engineer

Jul. 2023 – Present

#### Salesforce India

Hyderabad, India

- I work as a member of a team that handles Salesforce's core application.
- I work on developing and maintaining the reports system in the core application. An estimated 2 billion reports are currently deployed across various organizations. Thus, each change has to be carefully vetted before being published.
- Technology stack: Java, Javascript, Python

### Software Engineering Intern

May. 2022 – Jul. 2022

#### Salesforce India

Hyderabad, India

- Worked and collaborated as the member of a large team consisting of several members, including a mentor and a manager.
- Improved an existing full stack web application by using open-source as well as internal technology.
- Also won the intern hackathon during that period by developing a game for blind people.

## Other Interests

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**Alumni Cell, IIIT Hyderabad:** Outreach and Networking