





Anisha Jean Mathias

Postdoctoral Researcher

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Education


- 2018 – 2023  **PhD Mathematics**
CHRIST (Deemed to be University), India
Thesis title: *A Study on Domination in Signed Graphs*
- 2017 – 2018  **M. Phil Mathematics**
CHRIST (Deemed to be University), India
Thesis title: *Edge Domination on Certain Families of Chemical Graphs.*
- 2014 – 2016  **M.Sc. Applied Mathematics**
Amity University, India.
- 2012 – 2014  **B.Sc. Mathematics**
University of Delhi, India

Research Publications

Journal Articles

- 1 Mathias, A. J., Sangeetha, V., & Acharya, M. (2023). Restrained critical and abundant signed graphs. *Advances and Applications in Discrete Mathematics*, 38(1), 49–68.
 doi:<https://doi.org/10.17654/0974165823018>
- 2 Mathias, A. J., Sangeetha, V., & Acharya, M. (2021). Critical concepts of restrained domination in signed graphs. *Discrete Mathematics, Algorithms and Applications*, 1–11.
 doi:<https://doi.org/10.1142/S1793830922500100>
- 3 Mathias, A. J., Sangeetha, V., & Acharya, M. (2020). Restrained domination in signed graphs. *Acta Universitatis Sapientiae, Mathematica*, 12(1), 155–163.  doi:10.2478/ausm-2020-0010
- 4 Mathias, A. J. (2018b). Edge domination number on graph variations. *International Journal of Mathematics And its Applications*, 6(1), 185–193. Retrieved from  <http://ijmaa.in/v6n1-s/185-193.pdf>

Employment History

- May 2024–Present  **DCC Research Associate**, Research, Innovation and Impact, University of Arizona
- Conducting research on knowledge graphs and models to enhance their accuracy.
 - Study related to various in improving the accuracy query answering generated through LLM models.
 - Work with creating good visualization charts using PowerBI and Tableau.

Employment History (continued)

- Aug 2022 – Nov 2023

Assistant Professor, St Aloysius College

- Taught various mathematical subjects to graduate students.
 - Collaborated with colleagues and students in academic environments.
 - Managed institutional and student records.
 - Updated departmental and institutional policy documents.
 - Designed and delivered an online and offline certificate courses.
- Jan 2019– Jan 2021

Teaching Assistant, CHRIST (Deemed to be University)

- Assisted professors in conducting practical sessions on various mathematical topics, including Linear Algebra, Mathematical Modeling, and Discrete Mathematics, utilizing Python as a teaching tool.
 - Independently handled Business Mathematics classes for BBA and BCom batches, delivering engaging lectures and assisting students in understanding mathematical concepts relevant to business applications.

Miscellaneous Experience

Certification

- 2024

Google Advanced Data Analytics Professional Certificate: Awarded certificates upon successful completion of the courses authorized by Google and offered through Coursera.

Advanced Data Visualization with Tableau, Awarded certificate on successfully completing the course authorized by Tableau Learning Partner and offered through Coursera.

Foundations of Data Science, Awarded certificate on successfully completing the course authorized by Google and offered through Coursera.
- 2021-2022

Applied Data Science with Python, pursuing a one year online coursera course offered by University of Michigan.
- 2021

Introduction to Data Science in Python, Awarded course certificate on completing first course out of five enrolled course ‘**Applied Data Science with Python**’ authorized by University of Michigan and offered through Coursera.
- 2020

Mathematical Foundations for Cryptography, Awarded course certificate on successfully completing an online non-credit course authorized by University of Colorado System and offered through Coursera.
- 2011-2013

A-Level Diploma in Information Technology , National Institute of Electronics and Information Technology.
Project title: *Hospital Management*

Skills

- Academic skills (subjects taught)

Linear Algebra, Calculus, Graph Theory, Linear Programming, Differential Equations
- Languages

English, Hindi.
- Programming Languages

Python, MATLAB
- Misc.

LaTeX typesetting, Tableau and PowerBI.