Rahul Joseph Fernandez

Senior Research Assistant

EXPERIENCE

Cornell University **November 2022 -**
Senior Research Assistant

- Developed deep learning models for the prediction of nursing home closures leveraging complex longitudinal time-series data, resulting in accuracies over *80%*.
- Built internal Dash data application that generates user specified automatic reports and statistical analysis on large volumes of nursing home data.

Cornell University **August 2021 - December 2021; May 2022 - November 2022**
Research Assistant

- Built and maintained large longitudinal databases on mergers and acquisitions in the nursing home, hospice, and physician practice space, employing web scrapers on several public data sources including CMS data, SEC filings, press releases, news reports, etc.
- Conducted sophisticated econometric analysis on the effects of mergers, acquisitions, policies, etc, on facility and patient outcomes which led to publications in journals such as Health Affairs and the Journal of the American Medical Association.

Azim Premji University - School of Arts and Sciences **August 2019 - August 2020**
Research Assistant

- Led research on the dynamics of free-ranging dogs distributions in peri-urban mosaics with a focus on building spatio-temporal ecological models that account for anthropogenic spatial covariates.
- Employed network/graph theory to understand potential epidemiological phenomena on contact data obtained from dog populations, and the implications of their networks on disease propagation.
- Implemented code for calculations of a novel edge-based spatial density method for ecological home-range estimations.

Azim Premji University - School of Arts and Sciences **January 2018 - May 2019**
Undergraduate Researcher

- Conducted extensive research on the spatial distribution and dynamics of free-ranging dogs in a peri-urban ecosystem employing methods from ecology, economics, mathematics, network science, and complex systems theory.
- Collected over 2000 individual data points and built predictive species distribution models for FRD distributions in complex transition landscapes, using machine learning. Developed methods to test natural ecological hypotheses in systems with anthropogenic factors.

EDUCATION

Azim Premji University - School of Arts and Sciences — Economics (B.A) and Biology (B.Sc) 2016 - 2019

Cornell University — Biostatistics and Data Science (M.Sc) 2020 - 2022

SKILLS

Languages — Python, R, STATA, C++

Technologies — NetLogo, ArcGIS/QGIS, Google Earth Engine, Git/Github, SQL

Machine/Deep Learning — Natural Language Processing, TensorFlow/Keras, OpenCV, PyTorch, PySpark, CUDA

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