

ADITHI R. UPADHYA

A Geoinformatics graduate with an interdisciplinary research background. An enthusiastic R and Python developer. Working on mobile monitoring of air quality in Bangalore as a Geospatial data analyst. Currently seeking a PhD position in geospatial data analysis.

EDUCATION

- 2018 • **Bharati Vidyapeeth Institute of Environment Education and Research, Pune**
MSc Geoinformatics - CGPA 8.96/10 📍 Pune, India
- 2016 • **Sri Sathya Sai Institute of Higher Learning**
BSc Honors in Physics - CGPA 8.5/10 📍 Anantapur, India

RESEARCH EXPERIENCE

- 2018 | Present • **Data Science and Modelling**
Geospatial Data Analyst, ILK Labs 📍 Bangalore, India
 - Assisted in designing the study routes, collected air quality and GPS data. (Project partners: University of Washington, Seattle, University of California, Berkeley and CSTEP, India)
 - Developed data tools to clean, correct the collected data.
 - Analysed and applied models to the data.
 - Managed the database of big data sets.
 - Generated high-resolution maps using QGIS.
- 2020 | Present • **Elephant Atlas**
Asian Nature Conservation Foundation, GIS Consultant 📍 Bangalore, India
In progress : Elephant Atlas for the Karnataka State.
- 2020 | Present • **Other Community Service** 📍 Remote
 - Co-founder and Co-organiser of [R-Ladies Bangalore](#).
 - Peer [reviewer](#) for Journal of Open Source Software.
 - Volunteer for the [useR! 2021 global](#) (Sponsorship).
 - Facilitator of Asian Cohort of [R4DS book club](#).
- 2019 • **Exposure Assessment**
Consultant, New York Times 📍 New Delhi, India
Consulted on a story on [PM2.5 personal exposures](#) in Delhi neighborhoods.

CONTACT

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🐦 [AdithiUpadhy](#)

SKILLS

🌐 **Experience:** Worked on interdisciplinary projects.

💻 **Programming:** R, Python, QGIS, PostgreSQL, GitHub, ArcGIS

💡 **Other:** Data science, Statistics, Web apps, data tools

AWARDS & HONORS

[rstudio::global\(2021\)](#) Diversity Scholarship, 2021

[R@IISA Conference](#) Travel Award, 2019

Primer in Methods and Ecological Research (PRiMER)
Sponsored by ILK Labs, 2019.

Sri Sathya Sai Institute of Higher Learning Received Gold Medal - summa cum laude equivalent, 2016

Indian Academy of Sciences
Summer Research Fellowship Program, 2015

This resume was made with the R package [pagedown](#). Last updated on 2021-01-09.

January
2018
|
July 2018

● **Velocity estimation in the Amery Ice Shelf, Antarctica**

Research intern, National Centre for Polar and Ocean research

📍 Goa, India

- Estimated velocity from 2001 to 2018 using optical and microwave remote sensing for one of the most dynamic ice shelves in the East Antarctic region- the Amery Ice shelf system. - The techniques used are DEM-assisted co-registration pixel-offset-tracking and optical feature tracking.
- Observed the effect of Blue Ice Areas and Elevation and Melt duration on the estimated velocity using various satellite images.

April
2017
|
December
2017

● **Asset Connect - Web application using geospatial technology**

Master Thesis, Bharati Vidyapeeth Institute of Environment Education and Research

📍 Pune, India

- Designed and developed user-friendly, interactive geographic information system interface for inserting, editing and auditing ground-based assets using Javascript, C# and SQL to build it.
- The methodology consisted of a five-phase approach which included data modeling of masters and transactions, spatial analysis of assets using a comprehensive system, tracking history of assets, costing and reporting to provide an advanced decision support system.

November
2015
|
February
2016

● **Gamma Spectrum decay of Tb 159**

Project, Sri Sathya Sai Institute of Higher Learning 📍 Anantapur, India

- Verified the gamma spectrum decay of Tb 159 into Dy 160 using two software's called Gamma Vision and FIT.

April
2015
|
June
2015

● **Quantum Logic Gates**

Summer research fellow, Indian Institute of Sciences 📍 Bangalore, India

- Constructed quantum logic gates, their different types and the process of constructing them.
- Studied the differences between the classical and quantum logic gates and was briefly exposed to quantum teleportation.



TEACHING EXPERIENCE

2019
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2020

● **Grand Challenges Impact Lab**

Teaching Assistant, University of Washington

📍 Bangalore, India

- Assisted in projects design.

2019

● **Introduction to R Language for Beginners**

Instructor

📍 Bangalore, India



SOFTWARE PACKAGE(S)

2020

● **R package**



Maintainer and creator of [mmaqshiny](#) on [CRAN](#).

2020

● **Application**

Maintainer of [Pollucheck](#).

OTHER PROFESSIONAL EXPERIENCE

- July 2017
|
November 2017
- **Intern**
WAI Technologies  Pune, India
 - Designed and developed a demo android application and connected it with the backend (MSSQL) for data storage.
- December 2016
|
March 2017
- **Intern**
Tata Power Ltd.  Pune, India
 - Determined Landuse Land cover of Mulshi Catchment area.
 - Performed segmentation on very high-resolution images using eCognition software.

PUBLICATIONS UNDER REVIEW

- 2020
- **PM2.5/PM10 ratio over urban sites of India: Comparison with MERRA-2. Manuscript submitted for publication.**

B S, Rao S, Upadhyar AR, Kulkarni P, Vakacherla S.
- 2020
- **Impact of Covid-19 Lockdown on the fine Particulate Matter Concentration Levels: result from Bengaluru megacity, India.**

Vakacherla S, Kushwaha M, Kulkarni P, Upadhyar AR, B S, Prabhu V.

SELECTED PUBLICATIONS AND PRESENTATIONS

- 2020
- **Mobile-monitoring of Black Carbon and Ultrafine particles in Bangalore, India**
ISEE Presentation (Session: High Resolution Air Pollution Exposure Assessment)
- 2020
- **Indoor & outdoor PM2.5 concentrations in Chennai, India prior to & during the COVID-19 lockdown**
ISEE Poster
Puttaswamy N, Vakacherla S, Pillarisetti A, Upadhyar AR, Veerapan B, Saidam S, Sutaria R, Mukhopadhyay K, Sambandam S, Balakrishnan K.
- 2020
- **mmaqshiny v1.0: R-Shiny package to explore Air-Quality**
Journal of Open Source Software. 2020 Jun 28;5(50):2250.
Upadhyar AR, Agrawal P, Vakacherla S, and Kushwaha M.
- 2019
- **Exploring air quality data using the Shiny package**
R conference at International Indian Statistical Association, Presentation
- 2019
- **Mobile-Monitoring of Air Pollution (Black Carbon): Preliminary Results from Bangalore, India**
ISEE Conference Presentation

2018



Changes in Velocity of Fisher Glacier, East Antarctica using Pixel Tracking method.

ISPRS Conference Presentation

📍 Dehradun, India