

# Ayush Patnaik

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## Education

### University of Sydney

Masters (Research), Data Science, *2023 - 2024*.  
Project: Deep learning in survival analysis

### Australian National University

B.S.c, Physics, *2016 - 2019*.  
Projects:

Siding Spring Southern Seyfert Spectroscopic Snapshot Survey

Monte Carlo Simulation in Julia

### Skills:

Julia  
Python  
SQL  
R  
TeX  
Linux

## Experience

Research Associate at xKDR Forum, Mumbai, *Aug 2021 – Jan 2023*

Trainee journalist at ThePrint, New Delhi, *Jan 2020 – Jul 2020*

Software manager at Elysian Solutions, Canberra, *Aug 2018 – Dec 2018*

Chess coach the Sydney Academy of Chess, *Jan 2017 – May 2018*

### Languages:

English  
Hindi

## Research

“Exploring economic activity from outer space: A Python notebook for processing and analyzing satellite nighttime lights”, *Apr 2023*

“Foundations for nighttime lights data analysis”, *Dec 2022*

“But clouds got in my way: Bias and bias correction of VIIRS nighttime lights data in the presence of clouds”, *Oct 2021*

### Hobbies:

Chess  
3D printing  
Writing  
Hiking

## Packages

Survey.jl, For analysing complex surveys

NighttimeLights.jl, For cleaning nighttime lights data

DtD.jl, For estimating the distance to default using Merton Model

Also contributed to GLM.jl, TSFrames.jl, and CRRao.jl.

## Conferences

JuliaCon 2023 — Massachusetts Institute of Technology, *Jul 2023*

JuliaCon 2022 - Online, *Jul 2022*

Emerging Markets Conference 2021 - xKDR Forum, *Dec 2021*

JuliaCon 2021 - Online, *Jul 2021*

## Teaching

Mentor at Google Summer of Code, *May - Aug 2023*

Introduction to nighttime lights satellite imagery, Nagoya University, Online Workshop, *Dec 2022*

Teaching Assistant for “Regression and Classification” at Chennai Mathematical Institute, *Aug 2022 – November 2022*

Data science with satellite imagery at Chennai Mathematical Institute, Workshop, *Aug 2022*

Measuring economic activity from outer space at Mumbai University, Lecture, *March 2022*

Introduction to Julia at Chennai Mathematical Institute, Workshop, *Dec 2021*

Introduction to nighttime lights data at Nagoya University, Online Workshop, *Dec 2021*

Measuring economic activity from outer space at Delhi University, Lecture, *September 2021*