

# ADITYA PARTHASARATHY MADAPUSI

Data-Driven Scientist | Problem Solver | Astrophysicist

Committed to finding fast and robust solutions. Determined to learn new skills as required. Experience in leading international teams. Pioneered data capture, numerical analysis and visualisation pipelines for terabyte-scale time series datasets in astrophysics.

## Overview

- Designed and deployed end-to-end data capture, curation, analysis and visualisation pipelines for high data volume and velocity (~TB/hr) projects.
- Competent in statistical techniques, predictive modelling and numerical analytics.
- More than 5 years of experience in collaborative code development.
- Developed and tutored Bayesian inference and astrophysics training material for researchers across the world.
- Keen on transferring skillset to solving other interesting analytical problems.

## Demonstrated Skills

- Published *more than 40 peer-reviewed* research papers in leading journals, including the prestigious *Science* journal. Testament to my ability to interpret and find timely solutions to a diverse range of analytical projects.
- Lead developer of a data analysis pipeline used for processing and evaluating complex datasets. Widely used within the astrophysics community.
- Developer of a Bayesian inference software, which performs parameter estimation over multi-dimensional data. Incorporates regression, PCA, nested sampling and optimization algorithms.
- Actively collaborate with international organisations, including NASA and have secured multi-year funding for research projects.
- Have presented *over 40 research talks* to scientific audiences around the globe and *over 60 public talks* about science and astronomy.

## Important Results

I spearheaded the first scientific effort to show that NASA's space telescope can be used to search for gravitational waves.

**This research had a high impact factor.**

My Bayesian inference tool has been used to accurately model and predict trends in time-series data.

My data analysis pipeline has been used to produce some of the most precise data sets in physics.

My research has had a wide impact across astrophysics with more than 2000 citations.

My research has been mentioned in more than 50 press articles.

## Education & Jobs

2020 - Current Postdoctoral researcher at Max Planck Institute of Radio Astronomy, Germany.

2016 - 2020 Ph.D. scholar at Swinburne University of Technology, Melbourne, Australia.

2014 - 2016 Research assistant at Raman Research Institute, Bengaluru, India.

2009 - 2013 Bachelors in Instrumentation and Control Engineering, Anna University, India.



Email

adityapartha3112@gmail.com



Phone

+ (49) 17 665 699831

[linkedin.com/in/adityaparthasarathy](https://www.linkedin.com/in/adityaparthasarathy)

## Relevant links

Scan for my research publications



Code repository

[github.com/aparthas3112](https://github.com/aparthas3112)

## Techincal expertise

Python (Advanced)



Linux (Advanced)



Statistical Methodologies (Advanced)



Data Mining (Proficient)



Data Visualisation (Proficient)



Database Management (Proficient)



Containerization (Proficient)



Distributed Computing (Proficient)



## Languages

English, Hindi, Telugu & Tamil