

# Sayani Gupta

PHD STUDENT

+61 423 889 998 | [gupta.sayani@gmail.com](mailto:gupta.sayani@gmail.com) | [sayani.netlify.app](https://sayani.netlify.app) | [Sayani07](#) | [sayanigupta](#) | [SayaniGupta07](#)

## Technical Skills

- Programming/Software: R, SAS, SQL, Hadoop, Hive, LaTeX, Git, Github and continuous integration
- Data Science: exploratory data analysis, visualization, statistical modeling, forecasting, high-performance computing, web scraping and data cleaning

## Education

### Monash University

PHD (THESIS SUBMITTED NOVEMBER, 2021) IN ECONOMETRICS AND BUSINESS STATISTICS

Clayton, Australia

Feb. 2018 - present

### Indian Statistical Institute

M.STAT (MASTERS IN STATISTICS WITH QUANTITATIVE ECONOMICS SPECIALIZATION)

New Delhi, India

Jul. 2011 - May. 2013

### St. Xavier's College (Calcutta University)

B.Sc (HONOURS IN STATISTICS)

Kolkata, India

Jul. 2008 - May. 2011

## Analytics/Consulting Experience

### Monash Statistical Consulting Service

CONSULTANT

- Survey analysis in Translation and Interpreting Studies

Clayton, Australia

Jul. 2019 - Nov. 2019

### PAYBACK

SENIOR ANALYST

- Customer segmentation, predictive modeling, developing customer engagement, estimating wallet potential

Gurgaon, India

Jun. 2016 - Jan. 2018

### KPMG

CONSULTANT

- Electricity demand and price forecasting at Day-ahead Exchange markets, developing a Southern African Power Pool Transmission Pricing Mechanism (SAPP), Review of functioning of a power exchange of India - An audit of the Matching Engine/ Software Application used for price discovery and market splitting for various market segments

Delhi/Gurgaon, India

Aug. 2014 - May. 2016

### AF Mercados Energy Markets India Pvt. Ltd.

CONSULTANT

- Developing a Southern African Power Pool Transmission Pricing Mechanism (SAPP), Techno-economic analysis of the Indian power sector - demand (historical and projected), generation capacity (including long-term tie-ups), and future fuel supply and costs

Delhi, India

Jun. 2013 - Jul. 2014

## Teaching experience

### Monash University

TEACHING ASSOCIATE

- Applied forecasting for business and economics (ETC3550/ETC5550)

Clayton, Australia

S1 2019 - S1 2021

### Monash University

TEACHING ASSOCIATE

- Data modelling and computing (ETC1010)

Clayton, Australia

S2 2019

### Monash University

TEACHING ASSOCIATE (HEAD TUTOR)

- Exploratory Data Analysis (ETC5521)

Clayton, Australia

S2 2020

## Publications

## Visualizing probability distributions across bivariate cyclic temporal granularities

JOURNAL OF COMPUTATIONAL AND GRAPHICAL STATISTICS

• <https://doi.org/10.1080/10618600.2021.1938588>

published

2021

## Day ahead price forecasting models in thin electricity market

IEEE POWER AND ENERGY CONFERENCE AT ILLINOIS (PECI)

• <https://ieeexplore.ieee.org/document/7935757>

published

2017

## Working papers

---

### Detecting distributional differences between temporal granularities for exploratory time series analysis

SELECTING MOST INTRIGUING PLOTS WITH SIGNIFICANT DISTRIBUTIONAL DIFFERENCES

working paper

2021

### Clustering time series based on probability distributions across temporal granularities

CLUSTERING DISTRIBUTIONS CONDITIONAL ON TIME DECONSTRUCTIONS ACROSS WHICH PATTERNS ARE SIGNIFICANT

working paper

2021

## Rpackages

---

- 2020 **gravitas**: Lead developer (Google Summer of Code 2019 internship)  
Explore Probability Distributions for Bivariate Temporal Granularities
- 2020 **gghdr**: Author  
Visualisation of Highest Density Regions (HDR) using ggplot2
- 2018 **cricketdata**: Author  
International Cricket Data

## Talks

---

- 2020 **One World Symposium (virtual)**  
<https://sayanigupta-ows2020.netlify.app/>
- 2019 **International Indian Statistical Association (Mumbai, India)**  
<https://sayanigupta-iisa2019.netlify.app/>
- 2019 **Young Statisticians Conference (Canberra, Australia)**  
<https://sayanigupta-ysc.netlify.app/>
- 2018 **useR! (Brisbane, Australia)**  
<https://www.youtube.com/watch?v=VdFo1W8j1tU>

## Awards/Achievements

---

- 2021 ACEMS Business Analytics Prize (\$3,000 AUD)
- 2020 Greater than 9K CRAN (The Comprehensive R Archive Network) downloads for R package gravitas
- 2019 Ranked the second best student presenter at the Young Statistician's Conference (\$200 AUD)
- 2018 Monash Business School Student Excellence Award for academic excellence in Statistical Inference
- 2018-present Co-funded Monash Graduate Scholarship, DATA61 Supplementary Postgrad Scholarship
- 2017 Torchbearer award, PAYBACK India
- 2015 Encore Super Team, KPMG India

## Referees

---

Prof. Rob J Hyndman\*  
Rob.Hyndman@monash.edu  
+61 (3) 9905 5141

Prof. Dianne Cook\*  
dicook@monash.edu  
+61 (3) 990 5 2608

Dr. Emi Tanaka\*  
emi.tanaka@monash.edu  
+61 (3) 9905 0084

---

<sup>1</sup>\* Department of Econometrics and Business Statistics, Monash University, Australia.