Dr. PRAGYA GOYAL

Statistician | Educator | Researcher

Chandigarh, India

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ACADEMIC PROFILE

Ph.D. in Statistics (Econometrics) with strong experience in teaching Biostatistics, Statistics, and Mathematics at university level. Research interests include regression modeling, biased estimators, measurement error models, and applied econometrics. Experienced in supervising student research and conducting statistical data analysis using R and SPSS.

AREAS OF SPECIALIZATION

- Econometrics
- Linear Regression
- Measurement Error Models

EXPERIENCE

Present **National Institute of Labour Economics Research and Development, Narela**

- Assistant Director

2025-2026 **Centre for Advanced Studies in Social Science and Management, IDC, Chandigarh**

- Assistant Professor
- Teaching Statistics and Mathematics

2022-2025 **SnabbTech**

- Data Analyst
- Data Analysis, Report Generation, Dashboard Preparation

2022-2025 **University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh**

- Guest Faculty
- Teaching Biostatistics, Research Methodology, and Remedial Mathematics.
- Supported students' thesis and data analysis work.

2025 **Saket College of Physiotherapy, Panchkula**

- Guest Faculty
- Teaching Biostatistics

2020-2025 **Department of Statistics, Panjab University, Chandigarh**

- Research Scholar
- Research, Teaching and Data Analysis

2018 **Labour Bureau, Ministry of Labour and Employment, Chandigarh**

- Intern - Quarterly Employment Survey
- Participated in statistical data analysis as part of a 3-week training program.

EDUCATION

2014-2017 **Punjabi University, Patiala**

Bachelor of Science degree in Computer Science, Statistics, Mathematics

2017-2019 **Panjab University, Chandigarh**

Masters of Science degree in Statistics

2020-2025 **Panjab University, Chandigarh**

Ph.D. in Statistics (Specialization in Econometrics)

Thesis: "Efficiency Properties of Estimators in Linear Regression Model"

PROJECT

Statistical Data Analysis Using R

- Built linear regression models to predict body weight from height.
- Applied Chi-square tests to assess associations between IQ levels and academic performance.

PUBLICATIONS

- A New General Biased Estimator in Linear Measurement Error Model, **Communications in Statistics – Theory and Methods**, 2024.
- Selection of Tuning Parameter Based Upon Adjusted Coefficient of Determination and Generalized Cross Validation, **Communications in Statistics – Theory and Methods**, 2025.
- Assessing the Efficiency of the Weighted Mixed Liu Estimator in Linear Models with Measurement Errors**, Brazilian Journal of Biometrics**, 2026.

- Seasonal Dynamics, Extreme Pollution Events, and Hybrid Forecasting of Urban Air quality in India: A Multi-City Panel Analysis, **International Journal of Research Studies on Environment, Earth, and Allied Sciences (IJRSEAS)**, 2026.

CONFERENCES

- **ICMMAAC-2022**, JECRC University – Presented*:* Two-Parameter Estimator for Double Bounded Distribution
- **CHASCON-2023**, PU Chandigarh – Presented*:* Estimation of Parameters for Bounded Dataset
- **ICRAMDS-2024**, MANIT Bhopal – Presented*:* Biased Estimator in Restricted Linear Measurement Error Model
- **SMAIA-2025**, University of Delhi – Presented*:* Performance of Biased Estimator in Linear Measurement Error Model

WORKSHOPS

- Econometric Analysis using EViews – SSIM, Telangana (2025)
- Business Intelligence using Power BI – Skill Nation (2024)
- Time Series Analysis using R – PU Chandigarh (2024)
- Deep Learning & AI – KIT Tiptur (2023)
- Research Publications and Ethics – HRDC, PU Chandigarh (2022)
- SPSS Workshop – PU Chandigarh (2021, 2022)
- Machine Learning and AI – IIT Roorkee & PU Chandigarh (2019)
- Stakeholder Consultation on International Migration from India, jointly hosted by the International Organization for Migration (IOM) UN India and the Institute for Development and Communication (IDC), Chandigarh, (2026).

ACADEMIC/PROFESSIONAL ACTIVITIES

- Organized and delivered a lecture in two-day workshop on "Applied Statistics in R and Agentic AI Fundamentals" held from April 30, 2026 to May 01, 2026 at CASSM, IDC, Chandigarh.
- Delivered a lecture on "Economic Forecasting and Model Building" to final year economics students.
- Served as an Internship Coordinator for the Summer Internship Programme 2026 at CASSM, IDC, Chandigarh, overseeing the planning, coordination, and successful execution of all programme activities.
- Served as a Speaker and delivered a lecture on "Quantitative Research in Social Sciences: What is Data?" during the International Internship Induction Program at CASSM, IDC, Chandigarh.

COURSES TAUGHT

- Statistical Methods
- Biostatistics and Mathematics
- Real Analysis
- Statistical and Mathematical Methods for Economics
- AI & Analytics for Economists
- Basic Econometrics
- Advanced Econometrics

ACADEMIC ACHIEVEMENTS

- GATE(Statistics) Qualified, AIR 144

PROFESSIONAL MEMBERSHIP

- Life Member of Indian Society for Probability and Statistics (ISPS)

TECHNICAL SKILLS

- **Statistical Tools**: R, SPSS, Power BI, SQL
- **Software & Platforms**: LaTeX, Microsoft Office
- **Key Strengths**: Statistical modeling, Regression analysis and data analysis