# Sreehari Pulickamadhom Sreedhar

## Policy Analysis and Economics

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## **Profile**

Data-driven policy analyst with expertise in microsimulation and economic modeling, focused on delivering actionable insights for complex policy challenges.

## Areas of Expertise

Agent-Based Modelling - Policy Analysis - Microsimulation - Negotiation and Mediation - Statistical Analysis and Modelling - Machine Learning

## **Professional Experience**

Modeller - Junior Policy Advisor, (Australian Local Government Association) Canberra, ACT 06/2024 - 10/25

- Developed a centralized knowledge base of data at the council level, streamlining policy analysis for local governments.
- Designed and maintained small-area microsimulation models, enabling estimation of LGA level impacts of various policies with greater precision.
- Delivered rapid, targeted analyses for Policy Directors on welfare, climate adaptation, and Commonwealth grants, supporting strategic decision-making.

Research Intern, (Mandala Partners)

Canberra, ACT 09/2023 - 12/2023

- Synthesized comparative policy research to clarify the impact of federalism across Australian states and territories, informing client recommendations.
- Engineered robust indicators for quality of life, education, and healthcare using multifactor statistical modeling, enhancing the depth of policy analysis.

Research Assistant, (QuantEcon@ANU)

Canberra, ACT 07/2023 - 12/2023

- Applied high-performance computing and dynamic programming to solve classical economics problems, increasing research efficiency and accuracy.
- Co-authored and reviewed QuantEcon lecture materials with leading professors, elevating the quality and reach of the educational platform.
- Led a workshop on multidimensional weighting and constrained sampling in the context of spatial microsimulation, boosting participant proficiency in economic modeling.

Lead Data Analyst, (Amrita Vishwa Vidyapeetham)

Coimbatore, TN 10/2021 - 05/2022

- Analyzed large-scale sociological survey data for a joint government-university project, delivering actionable findings for project recommendations.
- Built an intuitive geospatial data analysis tool for non-technical social scientists, increasing adoption and usability among field researchers.
- Developed and delivered workshops on ethical data usage and deidentification, improving data integrity and compliance across research teams.

Research Intern, (Dr. Peter J. Kempthorne, MIT)

Remote 04/2021 - 06/2021

- Conducted spatial analysis and aggregation of ACLED social unrest data, revealing key trends in protest frequency for academic publication.
- Developed new metrics for unrest severity using perceived violence and latent intensity, enabling more nuanced mapping and comparison of unrest periods.
- Co-authored paper accepted for presentation at Joint Statistical Meetings 2022.

## Education

Master of Intl. and Dev. Economics, (Australian National University) Canberra, ACT 02/2024 - Present Relevant topics: Microeconomic policy - Econometrics and modelling - Game theory and competition - Static and dynamic optimization - Development policy

- Developed and implemented accelerated CGE models with state-of-the-art optimizers, enhancing the analysis of complex economic scenarios.
- Applied experimental and quasi-experimental methods in coursework and research, strengthening proficiency in policy evaluation and impact assessment.

Bachelor of Applied Data Analytics, (Australian National University) Canberra, ACT 02/2023 - 12/2023 Relevant topics: Demographic cohort analysis - Regression modelling - Social network analysis - Data wrangling and mining

- Built and validated microsimulation models to analyze the spatial distribution of Stage-3 tax cut impacts, providing insights into regional disparities.
- Used neural network classifiers and graph analysis to study suspected state-backed troll accounts on Reddit, contributing to the understanding of online manipulation.

Mediation and Conflict Management, (Harvard Law School)

Remote Spring 2022

Relevant topics: Negotiation and mediation - Conflict resolution

- Engaged in classroom simulations and case study analyses, developing effective negotiation and conflict resolution skills.

  Data, Economics, and Development Policy MicroMasters, (MIT JPAL)

  Remote 02/2022 08/2022

  Relevant topics: Microeconomics Econometrics Qualitative analysis Survey design Development policy Research ethics
- Completed rigorous coursework in microeconomics, econometrics, and development policy, with a focus on evidencebased approaches to global challenges.
- Applied quantitative and qualitative methods to analyze real-world development interventions, emphasizing research ethics and effective survey design.

Integ. MSc. Data Science, (Amrita Vishwa Vidyapeetham)

Relevant topics: Statistical modelling - Database management and design - Cryptography - Optimization - Real analysis - Linear algebra

- Developed a strong foundation in statistical modeling, database management, and optimization, applying these skills to real-world data science projects.
- Collaborated on interdisciplinary research, leveraging advanced analytical techniques to address complex problems in cryptography and data analysis.
- Transferred to ANU for a more policy-focused curriculum, aligning academic trajectory with career goals in policy analysis.

#### Other Courses

- International Political Economy of Decarbonization Harvard DCE
- Monetary Policy Analysis and Forecasting International Monetary Fund (IMFx)
- Effective Leadership through Emotional Intelligence University of Oxford (Online)
- MicroMasters in Entrepreneurship Indian Institute of Management, Bangalore (IIMBx)

## Skills

- Languages/Frameworks: Python, Julia, MATLAB, R, Stata, Power BI, Excel
- Simulation, Econometric Modelling, and Analysis
- Data Wrangling and Mining, Pipelining and Management, Visualization and Communication
- Neural Networks and Deep Learning
- Natural Language Processing