Akshay Natteri Mangadu

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Akshay is a young professional with rigourous training in policy analysis, economics, and statistics. He has experience in academic research and consulting, and has worked on a range of policy topics including measurement of poverty and well-being, policy impact measurement, financial sustainability for sanitation utilities, international trade development, and economic growth strategy formulation.

EDUCATION

The University of Chicago - Harris School of Public Policy Chicago, USA
Master of Arts in Public Policy Analysis, Certificate in Research Methods *Aug. 2017 – Dec. 2018*

- Masters program focusing on advanced econometric and statistical research methods in public policy analysis.
- Completed the first year of PhD coursework (Game Theory, Econometrics, and Microeconomics) at Harris.
- Recipient of **Harris-Mellon Scholarship**, GPA: 3.675/4.0.

The Chinese University of Hong Kong Hong Kong SAR
Bachelor of Business Administration - Integrated Business *Aug. 2013 – May 2017*

- Concentration in **Financial Engineering** and Minor in **Economics**, GPA: 3.68/4.0.
- Graduated with **First Class Honors** and Member of **Beta Gamma Sigma** honors society (awarded to business school students in the top 10% of the grade distribution).
- Awarded **Honours at Entrance** and received the **HKSAR Government Scholarship** for all four years.
- Placed on the **Dean's list** and **College Head's** list for three consecutive years - 2015, 2016, and 2017.
- Attended a summer program at the University of Cambridge.

TECHNICAL SKILLS

Data Analysis, Data Visualization, and Mathematical Modeling Tools
Stata (Advanced), **SAS** (Intermediate), **R** (Intermediate), **Excel VBA** (Intermediate), **Google Apps Script** (Advanced), **Python** - NumPy, Pandas, Seaborn, Matplotlib, Selenium and Plotly (Advanced), **Matlab/OCTAVE** (Advanced), **PowerBI** (Intermediate), **Bash Scripting** (Intermediate), and **C++** (Basic).

PROFESSIONAL AND RESEARCH EXPERIENCE

Deloitte Touche Tohmatsu India LLP Chennai, India
Senior Consultant *May 2021 - Present*

- Developed a mathematical model to estimate the investment and land requirement for the manufacturing sector at a district level, to propel Uttar Pradesh (most populous state in India) towards becoming a One Trillion Dollar Economy
- Led an impact assessment study to measure the economic impact of industrial subsidies provided to large manufacturing companies in Tamil Nadu
- Designed and developed project and tender monitoring dashboards for a large industrial development authority in India on PowerBI. Responsible for both the front-end and back-end of the dashboards.
- Conducted a detailed analysis of domestic and export markets for Medical Personal Protective Equipment (MPPE) in Bangladesh. The study was conducted for a leading multilateral agency.
- Conducted trade data analysis, charted trade maps, and identified opportunities to improve trade-connectivity for Personal Protective Equipment (PPE) in the South-Asian region. The study was conducted for a leading multilateral agency.

iVEIN Consortium - Indian Institute of Technology, Madras Chennai, India
Assistant Research Editor *Sep. 2020 - Feb. 2021*

- Co-authored four articles with **Prof. Thillai Rajan A.** on angel investing, venture financing and funding of start-ups in India for the edited publication of the consortium. The articles explore key trends in venture financing in India and the evolution of the Indian angel investing landscape (Chapters 11, 12, 16 and 17).

Harris School of Public Policy - University of Chicago Chennai, India (Remote)
Research Assistant *Apr. 2020 - Dec. 2020*

- Worked with **Prof. Bruce D. Meyer** on an academic study that explores trends in quality of housing for the middle class and poor in the United States. Performed advanced statistical analyses (variants of hedonic regressions) to isolate the dollar value of housing quality over time.
- Served as a research assistant on a published study on the well-being of single mothers in the United States.

Athena Infonomics India Private Limited
Associate Consultant

Chennai, India

Feb. 2019 - Mar. 2020

- Developed a **financial planning** tool to help utilities in developing countries (Kenya, Zambia, and Bangladesh) analyze and assess the performance of large-scale sanitation infrastructure projects. This was for the **Bill and Melinda Gates Foundation**
    * Led consultations in Kenya and Zambia to understand the requirements for such a tool.
    * Built robust financial models to project viability of service providers over a long-term horizon based on detailed analysis of the sanitation business in each region. Presented the progress at the International Water Association's Congress in Colombo.
- Analyzed survey data about the demand for piped water in Mandalay, Myanmar and co-authored a working paper about the findings, published by the **International Growth Center**.
- Designed primary survey instruments and analyzed survey data to understand the demand for retail housing loans that subsidize green homes (homes that are eco-friendly and resource efficient) for the **International Finance Corporation**.
- Co-authored an article on Development Impact Bonds which was published in the Business Standard.

Harris School of Public Policy - University of Chicago
Research Assistant

Chicago, USA

Sep. 2017 - Jan. 2019

- Served as a research assistant for a published academic study under **Prof. Bruce D. Meyer** about the impact of transfers on the well-being of disabled.
- Worked on multiple projects dealing with the measurement of poverty and material well-being in the United States.

CUHK Economics Department
Junior Research Assistant

Hong Kong SAR

Jun. 2015 - Jul. 2017

- Served as a research assistant for **Prof. Wallace KC Mok** for a project funded by the Hong Kong Research Grants Council, aimed at providing pointers for a new approach to measuring poverty in Hong Kong.
- Researched on measuring the extent of poverty in the United States using the Panel Survey of Income Dynamics, a US household survey that tracks over 5000 households and their offshoots for more than 45 years. Analyzed income data of approximately 200,000 individuals in a given year between 1968 and 2015 from the Current Population Survey.

PROJECTS

Articles in the intersection of Data Analysis, Policy, and Business   February 2021-Present

- Author articles in the intersection of data analysis, public policy, and business. The articles are published on my personal blog.
- Analyzed publicly available data on key policy issues using Bayesian Statistics, Non-Parametric Multivariate Methods (such as Principal Component Analysis), and Classical Econometric Techniques.
- Leveraged geographic data from satellites to understand trends in development/urbanization.

Performance of Politicians with Criminal Background   Harris, Jun. 2018

- Wrote a paper exploring if there were any performance differentials between politicians with criminal background and politicians without any background.

Testing the Efficient Market Hypothesis - A Survey   CUHK, Apr. 2017

- Wrote a review essay analyzing academic studies that tested the "Efficient Market Hypothesis" using various empirical strategies.

Application of the Finite Differences Method to Value Options   CUHK, Dec. 2016

- Used Finite Differences Method (FDM) to solve for the price of European options under the Constant Elasticity of Variance (CEV) model. Wrote a note about the method.
- Wrote a Matlab function that uses the Crank Nicolson method to compute the price of a put or call option under the CEV model, with a choice of using uniform or non-uniform discretization patterns.

RELEVANT COURSEWORK

Statistics and Economics

Statistical Theory and Methods (Graduate Level), Applied Econometrics (PhD Level), Advanced Microeconomics (PhD Level), Applied Game Theory (PhD Level), Stochastic Processes (Graduate Level) and Multivariate Statistics (Graduate Level).

LANGUAGES, CITIZENSHIP

Languages - English (Bilingual Proficiency) and Tamil (Native).
Citizenship - Indian.