SÉBASTIEN ANNAN-PHAN

Economist and Data Scientist

+1 (312)-918 7188 | *sphan@berkeley.edu* | *sebastienannanphan.com*

Technical skills

Quantitative Methods	Causal inference, econometric methods, time-series, prediction, simulation, spatial analysis.
Qualitative Methods	Data visualisations, survey and in-depth interviews, international field work.
Languages & Tools	R, Python, Stata, SQL, LaTeX, Git, QGIS, Illustrator.

Education

University of California, Berkeley
PhD in Applied Economics
2017 - 2021

Université Paris Dauphine, Paris
MSc in Economics
2013 - 2014

École Normale Supérieure, Paris-Saclay
B.A in Economics
2011 - 2014

Experience

Worldcoin
Senior Statistician
2022 -
San Francisco, CA

- Analyze the effectiveness of economic incentives and market design, including statistical analysis, design of experimentations, and identifying, creating, and analyzing key business metrics.

JD.com
Research Scientist
2021 - 2022
Mountain View, CA

- Partnered with product managers and researchers to deliver new algorithms with significant business impact on marketing campaign efficiency, sales, and customer engagement:
- Developed and launched privacy compliant pricing algorithms.
- Evaluated and optimized parallel experiments.
- Augmented marketing and promotion operations with real time adaptive algorithms.
- Delivered data driven insights for business and technical teams.

Global Policy Laboratory / UC Berkeley
Co-Investigator and PhD Fellow
2017 - 2021
Berkeley, CA

- Designed, conducted, and collaborated on data-driven policy relevant research projects
- Estimated the causal effect of electricity markets integration to mitigate the impact of climate change, using panel data regression, optimization algorithm, and spatial analysis. *Awarded 2019 UC Berkeley Best Paper*
- Collected, analyzed, and interpreted data on the effect of anti-contagion policies on the spread of COVID-19. Took part in a team effort to broadcast our results - published in Nature - to policy and decisions makers including the White House Office of Management and Budget & the CDC. *Ranked 22nd most discussed paper of 2020* ⬈
- Taught Microeconomics Theory and Environmental Economics & Policy to 300+ students classes over 4 semesters, focusing on economics methods.

Amazon Web Services
Economist (PhD Intern)
2019
Seattle, WA

- Applied a mixture of causal inference and machine learning to estimate demand for large computing power.
- Leveraged big data to identify heterogeneous treatment effects with unsupervised and supervised algorithms, random forest and causal tree.
- Drafted non-technical reports and held seminars to communicate findings to cross-functional partners and organization leadership.
- Developed an R package successfully adopted by other economists in the team.

Pre-doctoral experience

Energy Policy Institute at the University of Chicago
Research Specialist
2015 - 2017
Chicago, IL

- Collaborated on a multi-university project on the impact of climate change on key economic sectors.

- Combined empirical methods and simulations tools to produce standardized estimates. Methods included meta-analysis and large panel data regression.
- Utilized GIS methods in R/Python to process and aggregate high-frequency climate data, as well as simulate future damages based on pre-estimated and crowd-sourced empirical results.

Compass Lexecon   2014

Economist/Associate (Intern)   *Paris, France*

- Worked in the litigation and economics department on several regulatory and market design projects for European utilities and anti-trust regulators.
- Projects included: electricity storage potential, nuclear assets assessment and market power abuse.
- Designed and conducted a study leveraging high frequency wholesale market data to estimate the effect of renewable energies on electricity prices. *Published in a leading field outlet, The Energy Journal* ⧉

French Parliament   2012

Legislative Aide (Intern)   *Paris, France*

- Drafted bill proposal on fuel tax exemptions and environmental taxation.

Research

Publications:

Nature Scientific Reports, 2021. "*Public Mobility Data Enables COVID-19 Forecasting and Management at Local and Global Scales*" Illin C., Annan-Phan S., Tai X. et al.

Nature, 2020. "*The effect of large-scale anti-contagion policies on the COVID-19 pandemic*" with Hsiang S., Global Policy Laboratory, et al.

The Energy Journal, 2018. "*Market integration and wind generation: An empirical analysis of the impact of wind generation on cross-border power prices*" with Roques F.

The Energy Journal, 2016. "*The Impacts of Variable Renewable Production and Market Coupling on the Convergence of French and German Electricity Price*" with Keppler, J. H. and Le Pen Y.

Working papers:

"*Adaptation through Market Integration: Mitigating the Impact of Climate Change on Energy Expenditure*" Annan-Phan S.

"*A Distribution of Human Attention to Moments in Time using millions of Google searches*". Annan-Phan S., Biardeau L., and Hsiang S. R&R PNAS

"*Hot Temperatures, Aggression, and Death at the Hands of the Police: Evidence from the U.S*" Annan-Phan S. and Ba B. R&R Journal of Urban Economics

Distinctions

Tuaropaki Trust Doctoral Fellows, Goldman School of Public Policy	*2019 - 2020*
Hoos Sidney Best Econometric Paper Award, UC Berkeley	*2019*
International Graduate Fellowship, University of Chicago	*2016 - 2017*
Civil Servant Student Full Scholarship, École Normale Supérieure	*2011 - 2015*

Teaching

Microeconomics
University of California, Berkeley	*2017 - 2019, 2021*
Université Paris-Descartes	*2013*

Industrial Organization
Université Paris-Dauphine	*2014*