

Arsh SINGH

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Skills

Data Analysis and Hypothesis Testing	Python (Pandas, Scikit-Learn)	STATA, R
Data visualization	Python (Matplotlib, Seaborn)	R
Applied Machine Learning	Python (Keras, Scikit-Learn)	
Database Management	Python 3 (Pandas, PySpark)	SQL
Algorithm Implementation and Testing	Python 3	

Education

MicroMasters (Algorithms and Data Structure)	EdX (U C San Diego)	2023 - 24
PhD Economics (Applied Microeconomics)	U C Santa Cruz	2013 - 19
BE Chemical Engineering	Gujarat University	1999 - 03

Experience and Skills

CSU Stanislaus	Lecturer, Microeconomics	Jan - May 2024
<ul style="list-style-type: none">Teaching complex ideas in easy to understand ways.Planning and making presentations that inspire participation.		

Verité	Intern, Web App Dev.	Jan - May 2023
<ul style="list-style-type: none">Start to end, planning and implementing a python streamlit app		

U C Santa Cruz	Research Assistant	2016 - 19
<ul style="list-style-type: none">Data analysis and hypothesis testing in publicly available data.Statistical model estimation techniques using panel regressions (fixed- and random- effects models) GLS, 2-SLS, and OLS.		

SEFC, IFMR; Chennai, India	Research Fellow	2015-16
	Research Associate	2012-13
<ul style="list-style-type: none">Applied for many grants, consulted on many ongoing projectsAssisted in managing a multi-million dollar Bill and Melinda Gates grant.		

Projects & Applied Skills

All Projects

Genome Assembler (Work-in-Progress)	Link to Project Page
Skills: original algorithms; graph methods; string processing; implementing and stress testing. Building a genome assembler from first-principals that can handle error-prone reads; capstone project for MicroMaster (Algs. and Data Str.).	

Risk of Forced Labor in Int'l Trade	Manual Doc. (PDF)	App
Skills: data visualization; steamlit app implementation; original algorithms; graph methods. A web based application that helps visualize the risk of forced- and child- labor in international trade of goods. The pilot demonstrates the case of international cotton trade to- and fro- USA in 2021.		

Inference in Truncated Panel	Original Statistical Method
Original method of statistical inference in truncated panels such as Forbes 400. Peer-reviewed. Singh, A. and Singh, N. (2024), The 0.0003 Percent: Short-Run Dynamics of Extreme Wealth in America. Review of Income and Wealth, 70: 723-746. https://doi.org/10.1111/roiw.12660	