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 (Pandas, PySpark)	SQL
Algorithm Implementation and Testing	Python	

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

- Teaching complex ideas in easy to understand ways.
- Planning and making presentations that inspire participation.

Verité — Intern, Web App Dev. — Jan - May 2023

- Start to end, planning and implementing a python streamlit app

U C Santa Cruz — Research Assistant — 2016 - 19

- 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

- Applied for many grants, consulted on many ongoing projects
- Assisted 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