Garen Avanesian — Data Scientist

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🌐 Portfolio: karavan88.github.io

Profile

I'm a Statistician and Data Scientist with 7+ years of experience in turning data into actionable insights for global education and skills policies. My work bridges research and practice, engineering data systems, leading flagship reports, and building reproducible pipelines that help countries track progress toward the SDGs. I'm passionate about making data accessible and policy-relevant, especially in areas where human capital development can create more equitable opportunities.

Skills

Programming Languages: R, Python

Statistical Software: SPSS, Stata

Database Management: SQL

Machine Learning & Cloud Computing: Microsoft Azure ML, AWS, Posit Cloud, Databricks

Version Control & DevOps: Git/GitHub, GitHub Actions, Docker

Data Visualization: ggplot2, Shiny, Plotly, Power BI, Tableau

Experience

Data Science Specialist, United Nations Children's Fund (UNICEF), New York, USA
September 2022 — Present
Working in Data & Analytics Section, helping countries to foster child well-being through data-driven insights, harnessing the power of analytics to support and enhance global child welfare initiatives.

- Automated the process for generating statistical country briefs in R, utilizing Git/GitHub, to enable effective monitoring of progress on child-related Sustainable Development Goal indicators.
- Optimized the ETL process between statistical estimates production and the UNICEF Data Warehouse by utilizing R and Python, significantly improving data consolidation and accessibility.
- Co-led the technical team for the UNICEF Report on Progress on Children's Wellbeing, taking a leading role in enhancing methodological rigor and broadening statistical analysis based on the principles of literate programming in R.
- Led the UNICEF Report on Bridging the Digital Gender Divide, leveraging large-scale data and advanced statistical methods, including mixed-effect models, to advocate for equitable programs in digital skill acquisition.
- Standardized complex survey data through data harmonization and using version control (Git and GitHub), improving the production of child well-being estimates.
- Supervised a team of 3 analysts in the development of analytical tools to collect data on quality of learning amongst children.

Statistics Consultant, United Nations Children's Fund (UNICEF), New York, USA
August 2019 — June 2022
Was working in the Education Data Unit of Data & Analytics Section.

- Spearheaded the use of real time-data during COVID-19 emergency response for UNICEF's Data & Analytics, using open-source and internally collected data to analyze socio-economic impact of the pandemic on child wellbeing.
- Led the production of key data-driven reports on remote learning coverage, digital connectivity, and school closures, which influenced governmental policies and UNICEF country programs.
- Developed innovative statistical methodologies like the 'Remote Learning Readiness Index' and the 'Reachability Indicator', that set up UNICEF internal monitoring and program work in developing countries during the COVID-19.
- Co-led the MICS-EAGLE initiative to enhance the utilization of household survey data in developing countries for sector planning.
- Built statistical/data analytic capacity using R, Stata, and SPSS, across international offices and ministries, facilitating better data management during emergency responses.

Statistics Consultant, United Nations Office on Drugs and Crime (UNODC), Vienna, Austria
January 2019 — August 2019
Was working as a Data Analyst for Data Development and Dissemination Section.

- Led the data analysis for the UNODC Global Study on Homicide 2019, authoring significant sections, creating foundational analytical methods, and producing homicide estimates.
- Developed a Shiny R app for visualizing homicide data, integrating Plotly visualizations and Leaflet maps to effectively uncover and illustrate critical patterns and trends in homicide distribution.
- Conducted comprehensive statistical forecasting and predictive modeling of time-series data on homicide trends.
- Managed extensive databases using R and SQL, integrating geospatial and crime data for a holistic view of global homicide trends.
- Created dynamic visualizations and web applications in R and Python to make complex data more accessible, aiding global decision-making.

Database Manager, International Atomic Energy Agency (IAEA), Vienna, Austria
October 2015 — December 2018
Was working as a conference clerk and consultant to maintain conference participation data for different departments of the IAEA.

- Enhanced the statistical reporting system for the Conference Services Section, improving data precision and operational efficiency.
- Contributed to optimization of the IAEA Conferences and Events mobile application, significantly boosting user engagement.
- Developed visualization and reporting tools for conference participation data, yielding insights into participant demographics and trends.

Education

Southern Federal University/South-Russian Polytech University   **Rostov-on-Don, Russia**
PhD in Economic Sociology and Demography   *2009 – 2012*

Southern Federal University   **Rostov-on-Don, Russia**
Master's Degree with Honors in Sociology   *2004 – 2009*

Languages

English, Russian, German