

Iván Daniel Rodríguez Cruz

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PROFILE

Senior Statistics Undergraduate at the University of Costa Rica (graduation expected February 2025) with extensive experience in managing and analyzing complex survey datasets. At Anker Research Institute, I benchmark global living wages and assess income risks, delivering actionable insights for policymakers. My work at the Institute of Social Research focuses on inequality, income distribution, and socioeconomic disparities through advanced statistical modeling. Proficient in R, SPSS, STATA, and Excel. I leverage data-driven insights to support multilateral development strategies and inform global decision-making processes.

EDUCATION

University of Costa Rica, San José, Costa Rica
B.S. in Statistics (Expected: February 2025)

March 2020 to December 2024
GPA: 3.3/4.0 (estimate)

PROFESSIONAL EXPERIENCE

Anker Research Institute, New York, NYC (remote)
Junior Researcher

September 2024 to Present

- Estimated the cost of a decent living standard for workers and families using the Anker Methodology across Costa Rica, Indonesia, Malawi, and rural Tanzania, supporting wage-setting policies and improving global living conditions.
- Developed global reference values for living incomes and wages and conducted income risk assessments in rural Tanzania, comparing the applicability of the pre-existing reference value for the regions of Shinyanga and Tabora to assess regional disparities.

Center for Research in Pure and Applied Mathematics (CIMPA), University of Costa Rica, San José, Costa Rica

September 2024 to Present

Research Assistant

- **Project name:** “The impact of social determinants on the spread of infectious diseases” (Principal investigator: Fabio Sánchez Peña, PhD).
- Applied statistical techniques in R to analyze data from GLOBE-NASA, Costa Rican Ministry of Public Health, and other sources on mosquito habitats and transmission vectors.
- Ensured data integrity and consistency across diverse sources to support accurate modeling of environmental conditions and the prevalence of breeding sites.

Institute of Social Research (IIS), University of Costa Rica, San José, Costa Rica

August 2023 to Present

Research Assistant

- **Project name:** “The cost of a decent life in Costa Rica: Living Income and the development of methodologies for calculating subnational variations” (Principal investigators: Koen Voorend, PhD, and Fabio Sánchez Peña, PhD).
- Estimated income and living wages using statistical techniques, evaluating wage adequacy across 12 subnational regions to inform regional policy on income levels.
- Identified socioeconomic trends across Costa Rican cantons, providing insights into regional income disparities that guide economic and social research.

Academic Evaluation Center (CEA), University of Costa Rica, San José, Costa Rica

January 2023 to September 2023

Statistical Research Assistant

- Contributed to the design, implementation, and evaluation of measurement instruments for assessing academic programs at the University of Costa Rica using the LimeSurvey platform, improving the accuracy and efficiency of academic evaluations.
- Systematized statistical reports using R to support the academic evaluation of bachelor’s programs in Social Studies, Civic Education, Physics, Visual Arts, Business Informatics, and English, providing actionable insights to enhance curriculum effectiveness.

LEADERSHIP

National State Program (PEN) – San José, Costa Rica

March 2024 to August 2024

Statistical Research Assistant

- **Project name:** “Special chapter of the XVIII State of Education Report. Development of fundamental skills to overcome the crisis” (Principal investigator: Katherine Barquero Mejías, M.Sc).

- Analyzed PISA test databases from five periods using R, conducting comparative studies between Latin America and OECD countries to identify trends in student educational performance, supporting data-driven educational policies.
- Implemented psychometric analysis and clustering techniques on 2022 PISA tests to evaluate digital competencies, identifying key factors in academic performance and providing actionable insights for educational improvement.

PUBLICATIONS

1. Camacho Pochet, M., Cedeño Guzmán, A., **Rodríguez Cruz, I. D.**, & Villalobos Martínez, M. (2023). Percepciones sobre la salud mental en Costa Rica, Encuesta Actualidades 2023 (13 ed., pp. 8-9). https://www.estadistica.ucr.ac.cr/images/EEs/Documentos/Encuestas/Actualidades/Informes/2023_ESTADISTICA_UCR_ACTUALIDADES.pdf

CONFERENCE

1. Voorend, K., Sánchez Peña, F., Arias Salazar, A., Chou Chen, S. W., Alvarado Abarca, D., y **Rodríguez Cruz, I. D.** (September, 2024). “El costo de una vida digna en Costa Rica. Estimaciones subnacionales”. Jornadas Investigación, Acción Social y Docencia, Facultad de Ciencias Sociales, Universidad de Costa Rica. (Conference, Invited Talk).
2. **Rodríguez Cruz, I. D.**, Chou-Chen, S. W., y Voorend, K. (August, 2024). “Extensión de la estimación del ingreso vital mediante un análisis de conglomerados cantonales en Costa Rica”. XVI Jornadas de Análisis Estadístico, Escuela de Estadística, Universidad de Costa Rica. (Conference, Invited Talk).

CERTIFICATIONS & TRAINING

Costa Rica Big Data School, National High Technology Center (CENAT). August 2024

- Data analysis techniques with R and Python (e.g. manipulation and exploratory analysis).
- Introduction to machine learning and statistical models.

Microsoft Excel 2019 Academic Certification, Universidad Latina de Costa Rica. March 2019

- Advanced Excel techniques (60 hours).

PROFESSIONAL AFFILIATIONS

Latin American Population Association (Asociación Latinoamericana de Población, ALAP). (August 2024 to present). Institutional affiliation (student).

SKILLS/INTERESTS

Computer/Software: R, SPSS, Microsoft Excel, LATEX, STATA, LimeSurvey, Power Bi.

Languages: Spanish (native), French (B1, DELF Certification), English (basic).

PROFESSIONAL REFERENCES

1. **Koen Vooren, PhD. (koen.voorend@ucr.ac.cr).** Full professor and researcher at the Institute for Social Research (Instituto de Investigaciones Sociales) at the University of Costa Rica (IIS-UCR). He is also a Senior Researcher for the Anker Research Institute.
2. **Shu Wei Chou Chen, PhD. (shuwei.chou@ucr.ac.cr).** Associate Professor and researcher at the School of Statistics (Escuela de Estadística, EEs-UCR) and the Center for Research in Pure and Applied Mathematics (Centro de Investigación en Matemática Pura y Aplicada) at the University of Costa Rica (CIMPA-UCR).
3. **Guaner Rojas-Rojas, PhD. (guaner.rojas@ucr.ac.cr).** Associate Professor at the School of Statistics (Escuela de Estadística, EEs-UCR) and researcher at Psychological Research Institute (Instituto de Investigaciones Psicológicas) at the University of Costa Rica (IIP-UCR).|