

# Emile Honaminto Virgile DJOHI

Pre-Doctoral Research Fellow, Penn Development Research Initiative (PDRI-DevLab)

Data Scientist and Economist, African School of Economics (ASE)

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## RESEARCH INTERESTS

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Development Economics; Applied Econometrics; Climate and Environmental Economics; Governance and Conflict; Data Science for Policy; Machine Learning.

## EDUCATION

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**African School of Economics (ASE)**, Benin Sept 2021 – Oct 2023  
Master of Science in Mathematics, Economics and Statistics GPA: 4.0/4.3

**Master Thesis:** Development of a Web-Based Diagnostic Tool for Real-Time Classification and Visualization of Affected Areas in Colposcopy Images from the Central Hospital of Parakou, Benin.

Supervisor: Zimé Songbian

**African School of Economics (ASE)**, Benin Sept 2018 – July 2021  
Bachelor of Science in Statistics and Computer Science GPA: 15.65/20

**Bachelor Thesis:** Impact of Digitalization on the Economy of WAEMU Countries.

Supervisor: Nicodème Atchadé

## RESEARCH EXPERIENCE

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**Pre-Doctoral Research Fellow** Penn Development Research Initiative (PDRI-DevLab), University of Pennsylvania  
Supervisors: Erik Wibbels, Irina, Guy Grossman Jan 2025 – Present

- Researcher on *Climate Extremes and Economic Stressors as Predictors of Conflict in Central America (2012–2024)*.
- Built cross-country monthly climate-conflict datasets using MLEED, EM-DAT, ERA5, SPEI, FAO price datasets.
- Designed econometric models: distributed-lag, panel FE, interactions, and climate thresholds.
- Developed geospatial extraction workflows for temperature, precipitation, and drought indicators.
- Project: *Does Exposure to Climate Change Affect Attitudes? A Contingent Yes.*

**Pre-Doctoral Research Assistant** African School of Economics (ASE)  
Sept 2023 – Dec 2024

- Researcher on COVID-19 socio-economic impact studies in Benin, Burkina Faso, and South Africa.
- Conducted food security analysis using FCS, DDS, and rCSI indicators.
- Built and harmonized large-scale survey datasets; contributed to monitoring reports and policy briefs.

**Research Assistant and Teaching Assistant** Institute for Empirical Research in Political Economy (IERPE)  
Sept 2021 – Sept 2023

- Data collection, cleaning, and processing for multiple research projects.
- Statistics and econometrics analysis with R, Stata, Python.
- Geospatial analysis using QGIS and Python.
- Project follow-up and coordination between field and research teams.
- Teaching Assistant in:
  - Mathematics for Economics
  - Linear Algebra
  - Econometrics
  - Algorithms and Computation with R, Stata, Python, QGIS

## PROFESSIONAL EXPERIENCE

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**Customer Experience Service (MTN Benin)**, Cotonou, Benin  
Intern, Customer Experience Service (CES)

Apr 2021 – Jul 2021

- Supervised an online customer feedback survey for MTN Benin.
- Conducted statistical analysis and predictive modeling to assess customer satisfaction.
- Provided actionable recommendations to improve customer experience.
- Ensured project monitoring and follow-up.

**Ministry of Digitalization**, Cotonou, Benin  
Assistant to the Technical Director

Apr 2023 – Jul 2023

- Contributed to projects on disease detection in humans (e.g., malaria) and plant pathology.
- Developed machine learning tools for detecting pathologies in plants.
- Participated in project follow-up and coordination.

## TEACHING EXPERIENCE

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### Teaching Assistant, African School of Economics (ASE)

- **Quantitative Economics** (Thomas Sargent, John Stachurski, Matt McKay): Summer 2023, Summer 2024.
- **Computational and Algorithmic Methods (R)**: Gabor Nyéki (Princeton), Zimé Songbian — Fall 2023, Spring 2024.
- **Computational and Algorithmic Methods (Python)** — Fall 2023, Spring 2024.
- **Econometrics** — Instructor: Tamoghna Hader (2024).
- **Numerical Analysis** — Instructor: Guy Degla (Spring 2023).
- **Mathematics for Economics** — Instructor: Guy Degla (Fall 2023).
- **Linear Algebra** — Instructor: Jonas Doumata (Spring 2023).

## WORKING PAPERS

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- Climate Extremes and Economic Stressors as Predictors of Conflict in Central America (2012–2024).
- Does Exposure to Climate Change Affect Attitudes? A Contingent Yes.
- Socio-Economic Impact of COVID-19 on African Economies, Social Cohesion, and Governance.
- The Economic Impact of COVID-19 on Food Security in Benin and South Africa.

## WORKSHOPS AND SEMINARS

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- PRIO Research Workshop (2023) — Presented Master Thesis.
- University of Pennsylvania Research Seminar (Fall 2025) — Climate-Conflict Project.

## SCHOLARSHIPS

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- ASE Excellence Scholarship (2018–2021)
- World Bank Excellence Scholarship (2021–2023)

## CERTIFICATIONS

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- CITI Program: Social and Behavioral Research Refresher (**UPenn, 2025**)
- CITI Program: Human Research and Social/Behavioral Research (**UPenn, 2025**)
- Macroeconomics Diagnosis — **International Monetary Fund**
- Financial Markets for Public Policy — **Princeton University**
- Data Science: Machine Learning — **Harvard University**
- Impact Evaluation and Reproducible Research — **World Bank Group**

## TECHNICAL SKILLS

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**Programming:** R, Python, Stata, MATLAB, C, HTML, MySQL

**Software:** RStudio, Stata, Jupyter Notebook, QGIS, L<sup>A</sup>T<sub>E</sub>X, VS Code, PyCharm

**Methods:** Econometrics, Causal Inference, Panel Data, Machine Learning, Geospatial Analysis