

# EDGAR AGUILAR

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## INTRODUCTION

Data Analyst skilled in Python, R, Power BI, and Excel with 5+ years of experience translating complex datasets into insights across energy, finance, and development sectors. Expertise in data modeling, visualization, and building tools that drive evidence-based decisions.

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## EDUCATION

**American University, School of International Service**

*Master of Arts in International Economic Relations*

**Washington, DC**

*Expected May 2025*

**Calvin University**

*Bachelor of Arts in Economics and International Relations*

**Grand Rapids, MI**

*May 2019*

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## TECHNICAL SKILLS

**Programming & Data Analysis:** Python (Pandas, NumPy, Plotly), R (Tidyverse, dplyr, ggplot2, knitr), Stata, SQL (MS Access)

**Visualization & Reporting:** Power BI, Jupyter Notebooks, R Markdown, Excel (PivotTables, INDEX-MATCH, SUMIF), GitHub (version control)

**Quantitative Methods:** Financial modeling (DCF, WACC), econometrics, cost-benefit analysis, emissions modeling

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## PROFESSIONAL EXPERIENCE

**Energy and Extractives Global Knowledge (IEEGK) unit, World Bank Group**

*Consultant*

**Washington, DC**

*May 2024 – Present*

- Conduct econometric analysis of power market structures and utility performance for 190 utilities across 93 countries (Python, statsmodels).
- Develop renewable energy and access indicators for the 2024 World Bank Corporate Scorecard (Excel, Power BI).
- Build interactive dashboards, KPIs, and maps for a global electricity market structure website (launch 2025).
- Analyze small modular reactor (SMR) investment trends, author case studies for Bangladesh, Poland, and South Africa.
- Model emission factors to support \$203M small hydro project appraisal (advanced Excel modeling).
- Design relational databases and dashboards to track 201 energy procurement contracts.

**Center for Latin America and Latino Studies, American University**

*Researcher*

**Washington, DC**

*August 2023 – Present*

- Lead energy transition research on Ecuador, producing policy recommendations balancing sustainability and growth.
- Supervise research assistants and oversee data collection and analysis workflows.
- Edit and quality-check blogs, factsheets, and methodologies for technical accuracy.

**Association for a More Just Society, Transparency International**

*Senior Researcher and Energy Analyst*

**Tegucigalpa, Honduras**

*July 2020 – July 2023*

- Designed a development data portal featuring 300+ indicators across energy, health, education, and security sectors (Power BI, Excel).
  - Led full research cycle from data sourcing to dashboard publication, reaching national media and policymakers.
  - Built and maintained public dashboards monitoring Honduras' electricity sector (Tableau, Datawrapper).
  - Conducted financial modeling of 176 PPAs to support procurement reform and regulatory improvements.
  - Authored 12 reports on transparency and governance challenges, presented findings to national authorities.
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## RESEARCH AND ACADEMIC PROJECTS

**Utility Efficiency, Research Paper, American University**

*Economic Modeling Analyst*

**Washington, DC**

*January 2025 – Present*

- Benchmarked operational efficiency of 62 utilities across 49 countries using Data Envelopment Analysis (DEA) in R.

**Duke Energy Valuation Project, Graduate Course, American University****Washington, DC***Financial Modeling Analyst**August 2024 – December 2024*

- Built DCF and relative valuation models (Excel, Bloomberg Terminal) to simulate investment research reports.

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**LEADERSHIP AND SERVICE EXPERIENCE****Graduate Leadership Council, American University****Washington, DC***Vice President of Finance**May 2023 – Present*

- Manage \$47,000 budget for student initiatives and represent students on the University's Budget Committee.

**Office of Economic Development, City of Grand Rapids****Grand Rapids, MI***Community Representative**June 2018 – June 2019*

- Collected community input on displacement-free economic development for local officials.

**Student Senate, Calvin University****Grand Rapids, MI***Student Body President**May 2018 – May 2019*

- Set goals, led initiatives, represented students in faculty senate, and managed a 22-member team.

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**SELECTED PUBLICATIONS AND PROJECTS**

Asociación para Una Sociedad Más Justa (ASJ). State of the Country. 2023. <https://estadodepais.asjhonduras.com/>

--. Electricity Sector: Challenges and Solutions. 2022. <https://asjhonduras.com/webhn/sector-electrico/>

--. "The Dark Past in Power Generation Procurement Practices: A History that Should Not Be Repeated." 2023. [https://asjhonduras.com/webhn/wp-content/uploads/2023/08/PPT\\_-El-pasado-opaco-en-la-contratacion-de-energia-electrica.pdf](https://asjhonduras.com/webhn/wp-content/uploads/2023/08/PPT_-El-pasado-opaco-en-la-contratacion-de-energia-electrica.pdf)

--. "Where is the Energy? Analyzing the results of the National Loss Reduction Program (PNRP)." 2023. <https://biblio.asjhonduras.com/biblioteca/wp-content/uploads/2023/07/Reporte-PNRP.pdf>

--. "State of the Country: Electricity Sector." 2023. [https://estadodepais.asjhonduras.com/docs/Boletin\\_Estado%20de\\_Pais\\_Subsector%20Ele%CC%81ctrico\\_2023.pdf](https://estadodepais.asjhonduras.com/docs/Boletin_Estado%20de_Pais_Subsector%20Ele%CC%81ctrico_2023.pdf)

--. "Analysis of Past Bidding Processes and Recommendations for Future PPAs." 2021. [https://asjhonduras.info/bibliotecaASJ/documentos/ss\\_electrico/1sse.pdf](https://asjhonduras.info/bibliotecaASJ/documentos/ss_electrico/1sse.pdf)

--. "A Look at PPAs with Solar Energy Generators." 2021. [https://asjhonduras.info/bibliotecaASJ/documentos/ss\\_electrico/6sse.pdf](https://asjhonduras.info/bibliotecaASJ/documentos/ss_electrico/6sse.pdf)

--. "Performance of a Public-Private Partnership: The Situation of Honduran Energy Enterprise (EEH – in Spanish)." 2021. [https://asjhonduras.info/bibliotecaASJ/documentos/ss\\_electrico/9sse.pdf](https://asjhonduras.info/bibliotecaASJ/documentos/ss_electrico/9sse.pdf)