UPR
Recinto Universitario de Mayagüez

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Massachusetts Institute of Technology
50 Memorial Drive
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Dear Policy Impacts Hiring Committee,

I am writing to express my strong interest in applying for the Predoctoral Researcher position at Policy Impacts. I am Alejandro M. Ouslan, currently pursuing a Master's in Statistical Mathematics at the University of Puerto Rico, Mayagüez, with an expected graduation date of May 2026.

As a student specializing in Bayesian inference and spatial statistics, I have developed a solid foundation in advanced statistical modeling, econometrics, and data analysis. Through my role as a Lead Developer at the Puerto Rico Planning Board, I led a team of engineers in the creation of automated systems that gathered and processed economic data from multiple sources, including the BLS's QCEW and U.S. Census. This experience honed my skills in Python, STATA, SQL, and Rust which I believe would be directly applicable to your research projects at Policy Impacts.

In addition, I have experience orchestrating data workflows using GitHub Actions. While working with the Puerto Rico Planning Board, I designed and implemented an automated system where, upon merging a staging branch into the main branch, GitHub Actions would automatically build a Docker image and run various tests on the container. A separate script on the production server would then detect any changes to the compiled image and update the existing Docker image with the new version.

I am particularly interested in contributing to the project on the impact of local labor markets on upward economic mobility, as it aligns closely with my master's thesis. In my research, I use simulations to compare traditional spatial models, such as the Spatial Durbin Model (SDM), with generalized additive models (GAMs) that employ tensor products as spatial smoothers. This approach offers a solution when defining the spatial weights matrix is ambiguous or when spatial relationships are complex and not easily inferred.

Thank you for considering my application. I look forward to the opportunity to discuss how my background, skills, and interests align with the needs of your team.

Sincerely,

Alejandro M. Ouslan
Graduate Student
Department of Mathematics
University of Puerto Rico, Mayaguez