

Dear ArviZ team,

Your project "Evaluation of data visualization effectiveness" has caught my attention, and I would be thrilled to show you why I am a great fit. Bayesian data analysis and computational statistics have always been the end goal of my academic and professional development, which can be seen from my experiences. I have a solid educational background in mathematics, theoretical statistics, Bayesian modeling, time-series, programming, numerical analysis, and data science. Coupled with my passionate, curious, and creative personality, I would be an asset to the project and later to the ArviZ development team.

I fully developed the R package bayesforecast for Bayesian time-series analysis in Stan, which made me familiar with the laborious process of documenting and aware of the typical biases toward bad practices. In my last project, I studied the uncertainty in Bayesian cross-validation for model comparison. My contributions focused on extending the uncertainty results above the Gaussian linear model and presenting the results with valuable visualizations. I am familiar with several probabilistic programming languages such as PyMC, JAGS, Turing, and Stan, and use daily software such as brms, rstanarm, loo, bayesplot, bridgeSampling, and ArviZ. This project is an excellent opportunity to start collaborating on open-source software for computational statistics and improve my abilities in Bayesian modeling with Python, which I have focused on Stan and R in the last few years.

Work Plan and timeline

As for the work plan, I will start making a report analyzing the current defaults and usage advice for every plot, checking the plot's utilities, documentation, bugs and issues at its GitHub repository, and its relationship with other visualizations in bayesplot. After the report's conclusion, I will provide a document checking the current bibliography on visualization in Bayesian inference compared with ArviZ's current version. As a tentative timeline, I propose weekly meetings where I will deliver the weekly document with the evaluated plots. The visual reports will take around six/seven working weeks and four weeks to discuss and provide the final documentation of the current bibliographic work.

I would appreciate the opportunity to discuss my qualifications with you in person. Please contact me by email at asael_am@hotmail.com or by phone at +358 417044563 to schedule a time at your convenience.

Thank you for your time and consideration. I look forward to hearing from you soon.

Sincerely,

Asael Alonzo Matamoros