FELIX JIMENEZ

Work Authorization: US Citizen

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EXPERIENCE

Research Assistant

Texas A&M University / University of Wisconsin—Madison

Dec. 2020-Present

- Deep learning uncertainty quantification, Scalable Bayesian optimization and Gaussian processes approximation.
- TA for statistical learning for one semester.

Research Intern

Toyota Research Institute

May. 2023-Aug. 2023 Los Altos, CA

- Energy and Materials group.
- Developed an interpretable self-supervised learning procedure to generate neural embeddings of lithium-ion cell diagnostic data.

Research Intern

Microsoft Research

May. 2022-Aug. 2022 Cambridge, MA

- Statistics and AutoML group.
- Automating hyperparameter tuning for vision models using gradient statistics during training.

Mathematical Statistician (Prev. Research Assistant)

National Institute of Standards and Technology

05/2018-09/2020 Boulder, CO

- Stats/ML research: GAN performance on low dimensional multimodal data, hierarchical Gaussian processes for outlier detection.

PUBLICATIONS

[1] F. Jimenez and M. Katzfuss, "Scalable bayesian optimization using vecchia approximations of gaussian processes," in *International Conference on Artificial Intelligence and Statistics*, PMLR, 2023, pp. 1492–1512.

[2] J. Cao, M. Kang, F. Jimenez, H. Sang, F. Schafer, and M. Katzfuss, "Variational sparse inverse cholesky approximation for latent gaussian processes via double kullback-leibler minimization," *Accepted to ICML*, 2023.

[3] F. Jimenez, A. Koepke, M. Gregg, and M. Frey, "Generative Adversarial Network Performance in Low-Dimensional Settings," *Journal of Research of National Institute of Standards and Technology*, vol. 126, 2021.

[4] K. Tucker, B. Zhu, R. J. Lewis-Swan, J. Marino, F. Jimenez, J. G. Restrepo, and A. M. Rey, "Shattered time: Can a dissipative time crystal survive many-body correlations?" *New J.Phys.*, vol. 20, Dec. 2018.

ABOUT ME

I am currently in my fourth year of a PhD in Statistics at the University of Wisconsin-Madison, working with the Katzfuss group. My research focuses on scalable Bayesian inference, uncertainty quantification, and Bayesian optimization.

EDUCATION

Ph.D., Statistics

University of Wisconsin — Madison

2023-2025 Madison, WI

Texas A&M University

2020-2023 College Station, TX

M.S. / B.S., Applied Mathematics

University of Colorado Boulder

2014 – 2018 Boulder, CO

Miscellaneous Activities

- Supervising statistics undergraduate students.
- AISTATS 2023 reviewer.

TECHNICAL SKILLS

Programming

- Languages: Python.
- Libraries: PyTorch, BoTorch, NumPy, Pyro
- Visualization and writing: Matplotlib, LaTex.

Stats & ML

- Bayesian optimization, Bayesian statistics
- Gaussian processes, deep learning