Michael Issa

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Education

SAN DIEGO STATE UNIVERSITY

Bachelor of Science, Computer Science - 2024

Links

- in LinkedIn
- 🐙 GitHub
- 🌐 Website

Relevant Coursework

- Data Structures
- Machine Learning
- Applied Computer Vision (Graduate)

Skills

PROGRAMMING

C++ • Java • Python • JavaScript • SQL • HTML/CSS • LaTeX • Stan • R

SOFTWARE

Git • Microsoft Office • Tableau • Shiny • Quarto

TECHNICAL

Statistical Modeling • Predictive Modeling • Data Analysis • Time Series Analysis • Outlier Analysis • Bayesian Inference • Machine Learning

INTERPERSONAL

Communication • Project Managment • Software Development Cycles • Technical Writing

Experience

Data Processing

Faculty-Student-Mentor-Program
Worked under Dr. Melody K. Schiaffino (PhD, MPH) to visualize and clean data large data sets from (10+) hospital records. Collaborated in teams to read academic research articles and propose research initiatives.

Math Tutor

Tutored peer-students in linear algebra at the drop in Math and Learning Stats Center at SDSU. Tutored a cohort of 30-40 incoming SDSU students in precalculus for mathematical prerequisites

Projects

Autoregressive Forecasting in CmdStanPy

- Implemented Bayesian structural time series models to analyze and forecast time series data.
- Demonstrated the iterative process of fitting simple models, building up to complicated, realistic models.
- Project available at: GitHub

Bayesian VAR in CmdStanPy

- Developed Bayesian Vector Autoregressive (VAR) Models, demonstrating model fitting, impulse response analysis, and forecasting.
- Conducted a comprehensive comparison between Bayesian VAR models and MLE fits using macroeconomic data, showcasing the advantages of Bayesian approaches.
- Demonstrated the use of hierarchical priors in Bayesian VAR models, highlighting industry-standard priors and their benefits for improved model performance and interpretability.
- Project available at: GitHub

Binaural Sound Source Localization

- Predicted sound source azimuth using feature extraction and machine learning.
- Used spectral ITD, spectral ILD, and MFCCs as features; trained a Random Forest Classifier.
- Achieved an accuracy of 96% on held-out test data.
- Project available at: GitHub