Amir Liron

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Data scientist and AI-focused with experience in machine learning, uncertainty quantification, Python-based analytics, and technical research communication. Background spans classifier evaluation, reliability and risk analysis, applied problem solving across high-stakes environments, and data-informed decision-making.

Education

Texas State University **September 2024 - May 2026**

M.S. Engineering, Industrial Engineering & AI.,
Thesis: Uncertainty Quantification for Classifier Performance

Created novel methodologies to evaluate standard error across machine learning classifiers. The work focused on responsible deployment, and highlighted reliability as a key measure of performance.

Won best Research Paper in 5th IEEE ICAIC and currently pursuing a provisional patent serial number: 63/843,850 based on the technology presented.

Relevant classwork: Machine Learning App, PhD Level AI & ML App, Operational Research & Stochastic Optimization.

Texas State University **January 2020 - December 2023**

B.B.A., Computer Information Systems & Finance double major,

Relevant classwork: Cyberwarfare, Ethical Hacking, Agile Project Management, System Analysis & Design, Financial Accounting, Managerial Accounting.

Professional Teaching Experience

Texas State University

Graduate Teaching Assistant – Engineering Statistics IE 3320 **September 2024 – May 2026**

- Supported student exam-taking by clarifying problem statements and reinforcing key ideas.
- Offered weekly office hours to address student questions and provide additional instructional support.
- Converted course materials to appropriate assignments and quizzes for future reusability.

Graduate Teaching Assistant – Statistical Design of Experiment IE 4310 **December 2025- May 2026**

- Supported grading of major projects and lab testing.
- Uploaded course materials to the Canvas learning platform and assisted in maintaining grade records.

Other Professional Experience

TXST - CHIPS Special Project **(Hybrid) San Marcos, Texas, United States**

Assistant Researcher – AI Deployment & Project Management, **March 2024– Current**

- Supported deployment planning and modeling of an AI based accessibility project for people with disabilities in an industrial manufacturing environment.
- Enhanced technical reports for business sponsors to highlight progress and address misconceptions that may arise in interdisciplinary communication to ensure alignment.

TXST - PIM Special Grant Project **(Remote) San Marcos, Texas, United States**

Web Developer – Website Improvement & Outreach **October 2022– August 2023**

- Assessed user habit data from surveys and proposed targeted advertising channels to better reach key audience segments.
- Integrated an LLM-powered chatbot to support customer service and improve website user assistance for over 4,000 educators across Texas.

TXST - Campus Recreation Department **San Marcos, Texas, United States**

Web Developer – Website Improvement & Strategic Planning **July 2021– March 2022**

- Led migration of the Campus Recreation website to a new platform, reducing page count from 360 to fewer than 80 and improving maintainability and navigation.
- Partnered with program directors to redesign web content around program goals and user interaction needs.

Publication

Peer Reviewed:

- **Liron, A.**, Jimenez, J., Mendez, F. A., & Sharotry, A. (2026, February). *Interval-Based Estimation of Generalization Accuracy in Supervised Learning via Confusion Matrix Resampling and Bayesian Inference.* 2026 IEEE 5th International Conference on AI in Cybersecurity (ICAIC), https://doi.org/10.1109/ICAIC67076.2026.11395718.University of Houston, Houston, United States

In Preparation:

- **Liron, A.**, Dutta, A. K., Mendez, F. A., Shartory, A., & Jimenez, J. (In preparation). *Uncertainty Quantification for Performance Variability Using GABI and FRANCIS.*

Skills

- Programming: Python, Julia, C#, R, SQL
- Machine Learning: YOLO, regression models, neural networks (CNN, ensemble, Transformers), LLM applications (PyTorch, TensorFlow, scikit-learn, APIs)
- Deployment Mediums: HPC (Cloud compute, similar to AWS or Azure), On The Edge (Local ML Deployment)
- Analytics & Visualization: Excel, Access, Power BI, Google Analytics, SEO
- Simulation & Tools: Arena, Access, PowerPoint, Word

Projects

- Developing an open-source package to quantify uncertainty in machine learning classifier performance, translating academic research into a reusable model-evaluation tool.
- Developed a CNN-based pipeline for galaxy morphological analysis utilizing boosting methods across the light-spectrum using JWST images retrieved from NASA databases.
- Built an ingredient-based recipe recommendation app with persona-driven responses utilizing ChatGPT API keys to personalize suggestions and improve user engagement.

Leadership

FIJI Sigma Upsilon – Founding Father **January 2021 – December 2023**

Founded a Judicial Board, certified a charter, and carried out financial audits.

TX State INFORMS – Founding Member **September 2025 – Current**

Helped create the first INFORMS chapter in Texas State University.

Activities

- I enjoy cooking and occasionally host dinner parties with different culinary themes.
- I follow astronomy news and academic publications regularly (6equj5)!
- I volunteer as a mixed martial arts instructor at an old gym I used to compete for.