

Lennon Shikhman

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Education

Georgia Institute of Technology , Atlanta, GA <i>M.S. Computer Science</i> Concentration: Machine Learning	Aug 2025 – Dec 2026
Florida Institute of Technology , Melbourne, FL <i>M.S. Applied Mathematics</i> Emphasis: Applied Analysis & PDEs <i>B.S. Applied Mathematics</i> Minors: Physics, Computer Science Concentration: Data Science	Aug 2022 – Dec 2026

Experience

Software Engineer Jan 2026 – Present	Florida Institute of Technology, Melbourne, FL
• Designed and deployed production ML systems incorporating large language models, emphasizing controlled data ingestion, retrieval augmented generation, and fine-tuned inference pipelines with explicit evaluation and versioning.	
• Built end-to-end ML workflows with rigorous data validation, model evaluation, and monitoring to ensure reproducibility, robustness, and predictable behavior in live enterprise systems.	
Machine Learning Researcher Aug 2025 – Present	Florida Institute of Technology, Melbourne, FL
• Conducted research in scientific machine learning across aerospace perception and hyperspectral imaging, developing open-set vision-language localization models and hyperspectral localization pipelines for oncology applications, producing 2 research papers.	
• Developed frequency-domain autofocus and high-dimensional representation learning methods for hyperspectral imaging systems, executing large-scale experiments on high-performance computing infrastructure.	
Data Scientist Intern May 2025 – Aug 2025	FlexShopper, Boca Raton, FL
• Designed, trained, and validated machine learning models for real-time credit risk and fraud detection on transactional data (1M+ records), improving annualized profit by approximately \$2M through reduced fraud losses and improved approval quality.	
• Evaluated and optimized production inference pipelines under strict latency and throughput constraints, achieving sub-millisecond execution while maintaining stable predictive performance for high-volume, real-time decision systems.	
Software Engineer Intern Jan 2025 – May 2025	VitaGlide, Melbourne, FL
• Re-architected backend systems to support AI-driven features, improving scalability, reliability, and test coverage to 90% across core services and supporting infrastructure.	
• Implemented an on-device voice-command system with wake-word detection and sub-200 ms inference latency on constrained hardware in production settings.	

Publications

- **Entropy Production in Machine Learning Under Fokker–Planck Probability Flow.** *Submitted.* Developing a theoretical framework that models data drift in deployed machine learning systems as stochastic probability flow, interpreting model degradation as entropy production arising from statistical mismatch under Fokker–Planck dynamics.
- **Forcing and Diagnosing Failure Modes of Neural Operators Across Diverse PDE Families.** *Submitted.* Systematic stress-testing of neural operators across elliptic, parabolic, dispersive, chaotic, and financial PDEs to induce and diagnose failure modes under distribution shift, long-horizon rollout, and structural perturbations.
- **Manifold Learning for Early Detection of Influenza-like Illness from Wearable Data.** *In preparation.* Developing personalized, self-supervised manifold learning methods for early detection of influenza-like illness from high-frequency wearable time-series data, framing illness onset as a sustained geometric deviation from learned healthy physiological structure.

Certifications

Fundamentals of Deep Learning , NVIDIA	Nov 2025
Foundations of Financial Engineering , WorldQuant University	Oct 2025

Affiliations

Dell Pro Max × NVIDIA Ambassador Program — Dell Technologies & NVIDIA	Aug 2025 - Present
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