

# Tianning Feng

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## SUMMARY

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UPenn CIS Master's student specializing in Machine Learning and Full-stack Engineering. Experienced in architecting scalable AI applications (Transformers, GNNs) and real-time embedded systems. Proven track record of deploying SOTA research models into production and optimizing distributed system performance for low-latency environments

## EDUCATION

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**University of Pennsylvania**, MSE in Computer & Information Science August 2025 - May 2027

- Relevant Coursework: Artificial Intelligence, Database Systems, Embedded Systems

**Emory University**, B.S. in Computer Science & B.S. in Psychology, GPA: **3.794/4.0** August 2021 - May 2025

- Honors: Dean's List 2024 Fall-2025 Spring, Dean's List 2024 Spring-2024 Fall
- Relevant Coursework: Data Mining, Machine Learning, Data Structures & Algorithms, Cognitive Psychology

## PROFESSIONAL EXPERIENCE

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**Liba Space (San Jose, CA)** – Full-stack Engineer Intern September 2025 - December 2025

- Owned and led to development of the "Resume Analysis & Rewrite" feature from 0-1 for Jobnova, a North American job platform; seamlessly integrated it into the user flow, leading to a 50% increase in MAU.
- Collaborated with cross-functional teams to translate user needs into technical specifications and validation logic, leading the full development lifecycle from initial coding to production deployment.
- Optimized backend API workflows to reduce LLM token consumption and improve response quality; refined the system architecture based on user feedback and managed final quality assurance (QA).

**Government-Sponsored AI Education Initiative (Beijing, China)** – Contract Product Leader May 2025 –August 2025

- Led the technical execution of a 0-1 RAG platform, managing the full development lifecycle from database schema design (SQL/Vector) to API integration for automated lesson planning.
- Enhanced system response quality by refactoring the retrieval layer with a hybrid BM25 + Vector approach, significantly boosting the relevance of retrieved academic contexts.
- Automated content generation workflows by building a parsing engine that transformed raw educational PDFs into structured formats, reducing manual PPT preparation time by 70%.

**Shen Tong Technology Group Co., Ltd (Ningbo, China)** – Product Intern June 2021 – August 2021

- Improved usability scores by ~30% by analyzing user interaction logs and delivering technical specifications to resolve dashboard navigation bottlenecks
- Accelerated design sign-off by 20% by establishing a standardized feedback loop between Design and Engineering stakeholders, effectively reducing cross-functional communication overhead

## RESEARCH EXPERIENCE

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**Melody Lab (Emory University)** - Deep Learning Researcher September 2023 – May 2025

- Developed "SeizureFormer," a novel Transformer-based time-series forecasting model in PyTorch to predict seizure risks using RNS data, achieving state-of-the-art performance in 1–14 day horizons
- Engineered a Dynamic Hypergraph Neural Network (EpiDHGNN) for epidemic modeling, optimizing the message-passing algorithm to achieve 30% faster convergence and 7–12% higher accuracy than baselines
- Authored 2 papers accepted for Oral Presentation (Top 15%) at PSB 2026, validating the model's robustness and architectural innovation

**Language Biomarker Lab (Emory University)** - Research Assistant September 2022 – September 2023

- Reduced manual data processing workload by 80% by architecting automated ETL pipelines using Hugging Face and PyTorch for multi-modal data
- Standardized 100+ GB of raw data into structured formats for downstream ML tasks, implementing efficient data loading strategies to optimize training throughput

## PROJECT

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**PhillyHome Insight — Housing & Community Analytics Platform** September 2025 – December 2025

- Gained 200+ early subscriptions by leading the full-stack engineering of an analytics platform that integrates heterogeneous datasets (property, census, crime) via SQL
- Achieved sub-200ms query latency for complex geospatial queries by designing composite database indexes and optimizing RESTful API response structures

**Closed-Loop Glucose Regulation System (OpenAPS Simulation)** September 2025 – December 2025

- Achieved sub-100ms response latency in a safety-critical environment by optimizing C++ task scheduling and memory management on FreeRTOS
- Engineered a reliable PID control loop to regulate insulin delivery based on real-time CGM sensor data, simulating medical-grade device standards

#### Smart Home Assistant Development

January 2024 – January 2025

- Enabled concurrent control of 15+ smart devices by architecting a scalable backend using MongoDB and Swift with real-time synchronization
- Reduced data sync latency to <200ms by implementing real-time database observers (Change Streams) and optimizing the data transmission layer

#### SKILL

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- Programming: Python, C/C++, Java, JavaScript/TypeScript (React, Node.js), SQL, AI Agentic Programming
- Machine Learning: PyTorch, Hugging Face, Transformers, Graph Neural Networks, Reinforcement Learning
- Infrastructure & Tools: Docker, Git, AWS, MongoDB, Neo4j, Vector Databases, FreeRTOS, RESTful API

#### PUBLICATION

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- Feng, T., Ni, J., Gleichgerrcht, E., Jin, W. SeizureFormer: A Transformer Model for IEA-Based Seizure Risk Forecasting. Pacific Symposium on Biocomputing (PSB 2026) — accepted for oral presentation (Hawaii, 2026).
- Liu, S.; Gong, S.; Feng, T.; Liu, Z.; Lau, M. S. Y.; Jin, W. Higher-order Interaction Matters: Dynamic Hypergraph Neural Networks for Epidemic Modeling (EpiDHGNN). Pacific Symposium on Biocomputing (PSB 2026)