Brynn Yein Lee

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EXPERIENCE

Data Scientist | IngenID — Rochester, NY
AI-powered voice biometrics platform (24M+ transactions/yr, 13+ countries) — *Feb 2025 – Present*

- **Designed** full-cycle analytics experiments with SQL & Python to identify fraud-prone user clusters and uncover decision levers, reducing transaction failure by 20%; integrated model monitoring alerts into executive-facing dashboards.
- **Built** an in-house ML pipeline (Docker, TorchServe) replacing 3 outsourced workflows; **reduced** iteration time by 90% (4 weeks → 2 days), standardizing ETL pipelines, experiment tracking, and reproducible documentation.
- **Resolved** data leakage and feature imbalance through hypothesis testing and targeted feature engineering, improving model performance (80.8% → 95%).

Data Scientist Intern & Research Assistant | IngenID & AIR Lab — Rochester, NY
AI project for detecting deepfake speech in fraud scenarios — *Jun 2024 – Feb 2025*

- **Reduced** fraud detection Equal Error Rate (11% → 5%) via model architecture refinement and controlled experimentation grounded in analysis of 40+ public systems; **implemented** drift-aware model monitoring.
- **Led** iterative model evaluation and statistical validation processes to support decision-making under domain constraints; **balanced** precision–recall trade-offs with engineers and stakeholders.
- **Automated** creation of 20K+ balanced training samples (Python, APIs), supporting reproducible ETL pipelines and retrieval-augmented data generation for production-ready input.

Data Scientist & Co-founder | Artclub — Songdo, South Korea
Online course platform serving Korea & U.S. (Secured $3M seed funding) — *Jul 2020 – Jan 2022*

- **Designed** a chat-based data collection channel to analyze user behavior and iteratively refine product-market fit; **reached** #1 in category within 2 months through SEO and targeted ads.
- **Built** an NLP pipeline on 50K+ chat logs to segment users and extract latent intent; insights guided product roadmap and marketing strategy.
- **Conducted** funnel optimization and onboarding experiments using A/B testing, resulting in 25% conversion lift; **optimized** KPI tracking through custom dashboards (Tableau).

Data Analyst | Living Jin — Seoul, South Korea
E-commerce retailer for U.S. market (invested and mentored by ex-Nvidia Korea CEO) — *Feb 2019 – Jul 2020*

- **Developed** an NLP and clustering workflow to analyze 7K Amazon reviews, identifying high-value customer segments and informing 2 targeted product launches.
- **Built** a continuous A/B testing pipeline for marketing experimentation, leveraging insights from NLP-based review analysis; **improved** Amazon ad CTR (+15%), ROAS (+18%), sustained #1 category ranking, and boosted email open rates (+55%).

PROJECTS

Emergency Response Optimization - Partnership with City of Rochester Fire Dept. — *Dec 2024*

- **Led** a 5-person data team with 4 Fire Dept. stakeholders; **defined** KPIs, **coordinated** cross-functional collaboration, and **synthesized** team analyses into strategic recommendations.
- **Conducted** time series analyses on 19 years of historical incident data; **reduced** feature set by 92% (124 → 10) using Random Forest, SHAP, and statistical tests, improving forecasting accuracy by 15% and enhancing interpretability.
- **Built** forecasting models for incident demand using SARIMAX and Prophet (MAE: 0.34, MAPE: 19.2%), identifying levers to guide resource allocation recommendations.

TECHNICAL SKILLS

- **Programming & Tools:** Python, SQL, Git, Docker, REST APIs
- **DS & ML:** Statistical analysis, hypothesis testing, A/B testing, time series analysis, causal inference, feature engineering, feature importance, model evaluation, NumPy, Pandas, scikit-learn, XGBoost, SHAP, PyTorch, Hugging Face (NLP)
- **MLOps & Data Engineering:** ETL pipelines, model deployment (TorchServe), model monitoring & logging, Airflow, Weights & Biases, AWS (S3, EC2), Databricks
- **Visualization & BI:** Tableau, executive dashboards

EDUCATION

University of Rochester — *Rochester, NY*
M.S. in Data Science (Merit Scholarship); GPA: 3.83 — *Dec 2024*

Yonsei University — *Wonju, South Korea*
B.S. in Physics (Merit Scholarship) — *Feb 2019*