# Yejin Hwang

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### EDUCATION

# Texas A&M University-Corpus Christi

Master of Data Science; GPA: 4.0

Corpus Christi, TX

Expected Dec 2025

#### Sungkyunkwan University (SKKU)

B.A. in Culture & Technology, Food Science & Biotechnology(Double Major); GPA: 3.72

Seoul, South Korea

Aug 2023

#### Technical Skills

Languages:Python, R, PostgreSQL

Frameworks: Scikit-learn, TensorFlow, PyTorch, Streamlit Tools: Git, Tableau, Excel, VS Code, Jupyter Notebook, LaTeX

Libraries: Pandas, NumPy, Scipy, Yfinance, Matplotlib, Seaborn, Transformers, Statsmodels

#### Professional Experience

#### Research Assistant

Sep 2024 – Present

Texas A&M University-Corpus Christi Corpus Christi, TX

- Led research on time-series forecasting of stock data (TSLA, AAPL, NVDA) using ARIMA, TimesFM, and Chronos-T5, focusing on short-term market prediction and outlier analysis.
- Engineered key features such as lag variables, rolling statistics, volatility measures, and pattern recognition techniques to detect anomalies and enhance forecast accuracy.
- Improved model performance by 30% MAE reduction, supporting more reliable data-driven investment strategies.
- Built reproducible Python pipelines integrating yfinance API and PyTorch for automated data ingestion, model training, and reporting, maintaining attention to detail throughout each stage.
- Presented model comparison and results at major conferences, emphasizing real-world financial implications.

#### Clinical Data Specialist

Aug 2022 - Mar 2024

Samsung Medical Center

Seoul, South Korea

- Managed large-scale patient datasets, including physical, mental health, and medication records, by working directly with cancer patients and clinical staff.
- Built and maintained ETL pipelines to ensure high-quality, reliable data for clinical research and hospital decision-making.
- Collaborated with medical professionals to identify patient needs and improve data collection processes, supporting more effective and timely healthcare delivery.
- Applied biostatistics and data analytics techniques to provide actionable insights for multidisciplinary healthcare projects.
- Contributed to a culture of evidence-based medicine by enhancing data integrity and supporting high-impact research initiatives.

#### DATA SCIENCE PROJECTS

### Tesla Sentiment Analytics & ETL Pipeline | Python, Pandas, yfinance, VADER, SQL

- Developed an automated ETL pipeline integrating Tesla stock price data (via yfinance API) with Reddit-derived sentiment scores using VADER.
- Engineered time-based and moving average features, handled missing values, and merged multi-source data for downstream analytics.
- Stored final datasets in both CSV and SQLite, facilitating reproducible research and dashboard-ready data for market analysis.

#### Stock Forecasting with Transformer Models | Python, PyTorch, Hugging Face, TimesFM, Chronos-T5

- Implemented end-to-end forecasting pipelines for TSLA, AAPL, and NVDA using classical and transformer-based models.
- Conducted comparative analysis and proposed ensemble strategies to maximize forecast robustness.
- Built custom Python modules for data ingestion, feature engineering, and interactive visualization; delivered reproducible code and results.

# Joint NMSU/UTEP Conference on Math, Computer Science & Computational Sciences

Presented forecasting model comparison using Chronos-T5 and TimesFM on TSLA data

Las Cruces, NM

Apr 202

#### Coastal Bend Mathematics and Statistics Conference

Apr 2025

Presented research on transformer vs. traditional models for stock price prediction

Corpus Christi, TX

# AWARDS

- SKKU President's Award, Seoul, South Korea

Mar 2023

Awarded \ 2M SKKU President's Award for a data-driven R&D project developing functional gum using methanotroph bacteria to reduce methane emissions from cows. Recognized for innovation and environmental impact.