

Xuanqi (Henry) Wei

+1 (437) 985-8601 · henry-wxq@outlook.com · <https://github.com/Henry-wxq>

EDUCATION

University of Toronto, Faculty of Art & Science | Toronto, ON

Sep 2022 - Jun. 2026

B.S. in Mathematics & Statistics | Minor in Computer Science

Awards: Dean's List Scholar for 9 consecutive quarters; Citadel - Terminal AI Global Competition ranked 22/50000+.

Relevant Coursework: Theory of Probability and Statistics, Machine Learning, Deep Learning & Neural Networking, Time Series Analysis, Regression Model, Combinatorics, Nonlinear Optimization

RESEARCH EXPERIENCE

Dunlap Institute for Department of Astronomy & Astrophysics, University of Toronto

Apr. 2024 – Sep. 2024

Research Assistant - Searching for Outskirt Ursa Minor Members Using GMM - Markov Chain Monte-Carlo (MCMC) Sampling

Supervisor: Dr. Nathan R. Sandford & Prof. Ting S. Li

- Investigated stellar membership of the Ursa Minor Dwarf Galaxy by analyzing 6,548 spectroscopic data using DESI - Gaia astrometry.
- Built an automated Python pipeline to select 3,510 stars, transform RA/Dec to a UMi-centered frame, and implemented a two-component 4D Gaussian Mixture Model on velocity, metallicity, and proper motions using 64 MCMC walkers over 2,000 steps to infer membership posteriors.
- Classified 2,851 high-probability members ($P > 0.7$) within 18 half-light radii and uncovered 30 outskirt candidates, including 4 previously unreported stars.
- Deployed the probabilistic membership framework to DESI servers, enabling efficient identification of dwarf-galaxy outskirts and informing follow-up spectroscopy targeting strategies.

PROFESSIONAL EXPERIENCE

Shenwan Hongyuan Financing Services | Shenzhen, CN | *Investment Banking Intern - ECM Team*

Jul. 2025 – Aug. 2025

- Drafted valuation sections and industry overviews for IPO prospectuses in the electronic components sector, supporting equity offerings for issuers valued at 6.3 billion RMB.
- Built and validated market approach & DCF models by reconciling five years of financial statements with regulatory filings and audit reports, incorporating management interviews into core valuation assumptions.
- Leveraged comparable company analysis to refine valuation assumptions, optimizing capital allocation and bolstering the growth narrative by 15%.

Shenzhen WinTrust Information & Technology | Shenzhen, CN | *Part-time ML Engineer*

Nov. 2024 - Jun. 2025

- Co-designed and deployed AI modules for Li-Ning's WMS, enabling predictive inventory planning, intelligent routing, and real-time anomaly monitoring.
- Led development of a seq2seq Transformer on 300+ million historical orders, integrating a festival-uplift feed-forward head that converted forecasts into aisle-level heatmaps for QR-code robot patrol optimization.
- Reduced simulated picking/dispatch time by ~12.4% and delivered a reusable AI-WMS framework to lower logistics ~7.6% cost and inventory waste.

PROJECTS

Face Recognition on Intelligent Logistics Workbench | Industry-deployed Project | *Python, Java*

Sep. 2024 – Present

- Automated operator login and access control for an Intelligent Logistics Workbench powered by Raspberry Pi, now used across 20 sorting stations to improve ~14.8% workflow efficiency and on-site security.
- Achieved 99%+ authentication success rate in deployment using ArcFace-style embeddings (TensorFlow Lite) with open-set thresholding and multi-frame verification.

Time Series Modeling for Cocoa Price Forecasting | Capstone Project | *R*

Jan. 2025 – Apr. 2025

- Led a cocoa price-climate forecasting study by benchmarking classical time-series and ML models and reducing MAPE from 19% to 5.4% using a lagged climate regression.
- Engineered log-differenced price and lag features with weather covariates, ran residual diagnostics and walk-forward XG Boost validation, and generated 10-year cocoa-price scenarios for hedging, procurement, and farmer income support.

LEADERSHIP

UofT Students in Data Science & Statistics | Toronto, ON | *Outreach Director*

Aug. 2025 - Present

- Directed program design and stakeholder engagement as Outreach Director, organizing events with Deloitte and BMO, and overseeing speaker coordination, logistics, and student outreach.
- Redesigned events to increase participant engagement and value, including a joint "SDSS × Stripe" night with role-specific sessions, technical talks, and structured networking & group interview, leading to notably higher student and industry partner feedback.

SKILLS & INTERESTS

Software Skills: Python, Java, C, C#, R, HTML, SQL, CSS, JavaScript, React, Django, LaTeX, MATLAB, Git, Mongo DB

Interests: Level II Ski Instructor of Canadian Ski Instructor Alliances; Performance level Piano of China Conservatory of Music