Xinyu Chen

https://github.com/cxy7988

Education

Wenzhou-Kean University, CN Sep. 2022–Now

Exchange in **Kean University, US** Aug. 2024-Mar. 2025

GPA 3.86/4 (major GPA: 3.96)

B.S. in Management(Business Analytic), **minor** in Computer Science

Courses: Java Programming(A), Operating System(A), Database(A), AR Development(A), Data Structure Linear Algebra(A), Statistic(A), Discrete Mathematics, Calculus

Work Experience

Wenzhou-Kean University, Peer Tutor Oct. 2025-Now

- Served as a peer tutor for Java and Python programming courses, and also taught courses such as Computer Operating Systems and Data Mining.

Proya Cosmetics Co., Ltd., Data Analyst Aug. 2025

- Obtain business data from data platforms such as Alibaba and ByteDance, and conduct data preprocessing, including data cleaning and data annotation.
- Monitor the updates and comments of KOLs on social platforms such as Weibo and Xiaohongshu, and conduct natural language analysis based on the existing dictionaries.

Firstack Limited Liability Company, Software Design Engineer Jun. 2025–Aug. 2025

- Engineered an oscilloscope software with **Qt**, streamlining hardware debugging and enabling real-time waveform visualization, cutting hardware debug time per iteration from 15 min to 5 min.
- Refactored **C/C++** legacy codebase by applying MVC design, redesigning data models and rendering widgets, and optimizing filtering logic for large datasets—resulting in a 20% performance gain.

Firstack Limited Liability Company, Financial Data Assitant Jun. 2023–Aug. 2023

- Optimized financial data workflows by integrating **SQL** to overcome Excel performance limitations, enabling efficient cleaning and validation of datasets—including $100M in fixed assets.
- Conducted data analysis on 200+ financial documents to ensure CSRC IPO compliance, helping shorten IPO reporting cycle by 2 weeks

Zhejiang University Research Project, Data Analyst Jul. 2022–Aug. 2022

- Interviewed 100+ rural families and used Excel to organize and visualize survey data through charts and pivot tables, supporting socioeconomic analysis for rural development research.
- Co-authored the research report with professors and proposed improvement for province government agencies.

Projects and Activities

Campus Card & Utility Fee Query App Jun. 2025-Now

- Reverse-engineered OAuth2 flow using **Fiddler** and decrypted AES payload to reconstruct undocumented **REST** APIs for campus card and utility data access.
- Built **Flask** backend with RESTful API and **SQLite** database to store daily usage records and automate APNs push notifications for balance and utility alerts.
- Developed iOS frontend in **Swift** with async fetching, dynamic UI, and secure email login

Official Course Table Conversion Software Oct. 2025

- Built a Python application that extracts course schedule data from PDF documents using pdfplumber and tabula-py, with intelligent parsing to handle multiple table formats and clean messy data
- Developed an end-to-end pipeline converting PDF data to structured CSV and ICS calendar formats, with smart fallback logic and interactive CLI for seamless user experience
- Designed modular classes for course data modeling using pandas, implemented clean separation of concerns with robust error handling and multi-format output support

Kaggle Competition - Predict the Introverts from the Extroverts Jul. 2025

- Built a three-stage Stacking framework combining **neural network** feature extraction with traditional algorithms like **Random Forest** and **XGBoost**, achieving multi-model ensemble prediction
- Applied IterativeImputer for missing values and **SMOTE** for class imbalance, optimized hyperparameters via GridSearchCV with cross-validation, achieved 97.17% validation accuracy
- Delivered complete pipeline from data exploration and feature engineering to model deployment, implemented AUC-weighted ensemble strategy with multiple prediction versions

Virtual Reality Shopping Display System for Pop-up Stores Apr. 2025-May. 2025

- Built AR shopping system in **Unity** enabling users to scan physical labels and interact with 3D product models, reducing physical sample costs and improving demo efficiency at pop-up stores.
- Optimized animation rendering and user event triggers by **C#**, implementing dynamic button controls and reducing interaction latency by 35%.

xv6 Operating System Optimization Feb. 2025-May. 2025

- Implemented a user-level shutdown system call in xv6 using low-level I/O port instructions, reducing manual test overhead
- Designed and built a Multi-Level Feedback Queue scheduler with dynamic priority adjustment and aging policy, improving multitasking responsiveness and fairness by 60%.
- Developed a Lazy Page Allocator for on-demand physical page allocation, reducing unused memory footprint and increasing overall memory efficiency 20%.

Finance Research, *Do Repurchase increase the output of Innovation* Sep. 2023-May. 2024

- Developed automated Python web crawlers and utilized **SQL** for large-scale data collection, cleaning, and integration, reducing data preparation time from weeks to days.
- Built regression and PSM-DID models in **Stata** with high explanatory power (avg $R^2 = 0.91$), achieving statistically significant results ($p < 0.01$) across 100K+ firms.
- Discovered a significant positive relationship between share repurchases and patent output; co-authored a paper accepted for presentation at the Multinational Finance Society Conference (Finland, 2024).

KPMG ESG Case Study Competition, Qualify for the final Oct. 2023

- Led a 4-member team to design ESG strategies for Ant Group's rural finance expansion; directed data analysis and presentation efforts that helped qualify for the national finals.
- Processed and analyzed loan data from 10,000+ households in 100+ rural regions using **Snowflake**, and created interactive **Tableau** dashboards to present actionable insights in the final report.
- Built regression and k-means models in **KNIME** to assess the impact of ESG behaviors on loan profitability —helping reduce bad debt rate by 0.3% and narrow wealth gap index by 0.2%.

Rewards

International Study Scholarship - First Prize (Top10 in University) Jan. 2025
WKU College Scholarship - Third Prize (Top5 in Major) Nov. 2024
WorldQuant Quantitative Trading Challenge - Bronze Prize May. 2024
Bloomberg Stock Challenge - No.139 in Asia Dec. 2023
The 14th College Students' Career Planning Competition - Third Prize Nov. 2022