Yingxin (Skyler) He

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EDUCATION

University of Richmond, U.S.   *Bachelor of Science in Business Administration*   Aug.2021 – May. 2025
Double Major in Business Administration-Finance concentration and Computer Science
Honors: All A Dean's List (2022 - 2024)   *GPA:* 3.75/4.00
Certification: Machine Learning Specialization, Data Engineering Foundation
Relevant Courses: Software Engineering, Human & Computer Interaction, Data Structures, Algorithm, Database System, Statistics for Business & Economics, Data Analysis & Computing for Economics & Business, Investment

WORK EXPERIENCE

University of Richmond, U.S.   *High Performance Computing (HPC) Assistant*   March. 2024 – Present
- Installed and configured Linux operating systems tailored for high-performance computing applications.
- Assembled a traditional high-performance GPU-only cluster, enhancing computational capacity for parallel processing tasks.
- Managed business, technical, and operational metadata for Spydur HPC, using statistical analysis and visualization to support senior management's data-driven decisions.
- Built optimized database schemas with robust taxonomy and ontology frameworks in SQLite, enhancing data organization and retrieval.
- Conducted QA testing for HPC Python library, ensuring performance and functionality in distributed environments.
- Developed an automated Python ETL program, identifying missing libraries in Spydur executables, maintaining a dynamic SQLite database, and reducing outdated library risks by 95%.
- Optimized SLURM database management and implemented causal inference modeling with Pandas and Tableau, enhancing Spydur cluster efficiency.
- Created a simple and efficient web browser UI for Spydur, improving accessibility and cluster data viewing.
- Demonstrated GitHub expertise by organizing a comprehensive SLURM tutorial in Markdown, detailing job submissions and workload management for CPU and GPU processes.

Cobotiq, U.S.   *Software Engineer Intern*   Aug. 2024 – Present
- Led as Scrum Master, managing Git flow control and ensuring seamless Agile methodology across the team.
- Designed a single threading fleet management system in C++ with UI(wxWidgets), Database(MongoDB), System Manager, and Simulator for a design competition.
- Developed an API to integrate a MongoDB database for robot data storage.

SWS MU Fund Management, China   *Quantitative Finance Research Intern*   June. 2023 – Aug. 2023
- Boosted predictive accuracy by 10% using CNN models and A/B testing on CSI 300 data (2001–present) by converting candlestick charts to grayscale images and analyzing cumulative earnings over subsequent trading days.
- Improved BTC price predictability by 15% for traders by implementing RSRS indicator with optimized volume-price data and statistical programming to generate precise buy/sell signals.
- Enhanced SSE Composite Index forecast accuracy by 10% through decade-long data analysis with Python libraries, applying year-over-year plotting, Fourier transforms, and Gaussian filters to identify patterns.

RESEARCH EXPERIENCE

University of Richmond, U.S.   *Data Science Analysis on Genetic Biology*   May. 2022 – April. 2023
- Developed a robust pipeline using Python and Slurm to convert standard genomic data files, including approximately 10,000 data entries, into specialized bio formats for further analysis, achieving a 95.83% improvement in efficiency
- Utilized Python's statistical analysis packages to execute outgroup f3 statistics and Seaborn for data visualization, delivering statistically significant genetic composition insights for a genetic biology lab study funded with $415,081

SKILLS

- **Programming Languages:**   Python, SQL, R, C/C++, Java, MIPS, HTML, CSS, JavaScript
- **Data Analysis & Machine Learning Packages:**   Pandas, Matplotlib, Seaborn, NumPy, ggplot2, Tableau, Power BI, PyTorch, TensorFlow, statsmodels, SPSS
- **Version Control & Operating Systems:**   Git, Linux, Vi/Vim, Slurm, Bash shell scripting