Christopher Lam

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SUMMARY

Aspiring Software/Data Engineer with hands-on experience in full-stack development, data visualization, and applied machine learning. Strong interest in building scalable backend systems and intuitive, user-focused interfaces. Proficient in Python, SQL, and React, with a data-driven approach to problem-solving.

EDUCATION

PURDUE UNIVERSITY   **West Lafayette, IN**
Bachelor of Science   **May 2025**
Majors: Computer Science & Philosophy
Minors: Supply Chain Engineering Technology & Statistics
Relevant Coursework: Database Management, Financial Mathematics, Linear Regression, Statistics, Data Mining & Machine Learning, Econometrics-style Analysis, Information Systems, Operations & Supply Chain Analysis, Algorithms

WORK EXPERIENCE

PERATON LABS   **Basking Ridge, NJ**
Cyber Research Intern (Software Systems)   **Jun 2024 – Present**
- Designed and implemented a full-stack system (Python/JavaScript) for geospatial visualization of military COAs, integrating backend APIs and dynamic front-end dashboards to improve system efficiency and decision accuracy.
- Created dynamic charts to effectively communicate COA information, enhancing user understanding and driving informed decision-making.
- Engineered a customizable COA generator that automated test data creation, improving testing throughput by over 50%.
- Collaborated with a 11-person Agile team using Git and CI/CD pipelines for feature integration and testing.

Cyber Research Intern (Frontend Data Visualization)   **Jun 2023 – Aug 2023**
- Created Python-based tools enabling real-time visualization of network performance and cost-relevant metrics.
- Improved data-processing efficiency by 40% by optimizing system load and modularizing code.
- Built customizable charts and displays used for internal reporting and cost-impact assessments.

PROJECTS

EV Sports Bet Analyzer   **Wyckoff, NJ**
Project Creator   **May 2024 – Jun 2025**
- Developed an analytics tool that applied web scraping, statistical modeling, and expected-value optimization to evaluate real-world data-driven decisions across over 1,500 test cases.
- Integrated linear regression and control charts to plot past performance and predict future results, storing structured and unstructured data through MongoDB.
- Achieved an approximate 67.5% accurate pick rate and average risk-to-reward ratio of 1 to 0.85 \$USD, resulting in a final positive EV of \$0.2487 per bet placed.

SKILLS

Languages: Python, SQL, R, JavaScript
Data Engineering and Processes: ETL/ELT Pipelines, Apache Spark, Parquet, Data Modeling, Batch Processing, Data Validation
Frameworks & Backend: Django, Flask, Node.js
Databases: PostgreSQL, MongoDB, Firebase
Cloud & Infrastructure: AWS (EC2, S3, IAM), Docker
Tools & Practices: Git, GitHub, CI/CD Pipelines, REST APIs, Unit Testing, Object-Oriented Programming
Data Analysis & ML Foundations: Pandas, NumPy, TensorFlow, PyTorch
Methodologies: Agile, Scrum, DevOps