

# SALEH YAHYA

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## EDUCATION

### University of Illinois Urbana-Champaign

Dec 2027

M.S. in Computer Science

- Relevant Courses: Parallel Programming, Distributed Systems, Scientific Visualization, Numerical Methods, Data Cleaning, etc

### Lewis University

Dec 2026

B.S. in Computer Science

B.S. in Information Technology

- Concentration: Systems Programming

## PROFESSIONAL EXPERIENCE

### Lewis University | Undergraduate Teaching Assistant

Aug 2025 – Dec 2025

- Elected from 20+ students to assist for Object-Oriented Programming class, providing tutoring and coaching with Python.
- Organized 2 weekly study sessions, for collaborative problem solving and stronger understanding of core algorithms.
- Improved my students' performance, resulting in a 21% higher average grade compared to the previous semester.

### Paidwork | Machine Learning Engineer Intern

Sep 2025 – Nov 2025

- Improved biometric verification reliability by building real time liveness detection features using Python and TensorFlow.
- Increased document verification accuracy by refactoring object detection and optical character recognition models across multiple international identification formats, improving text extraction and layout detection by about 8%.
- Strengthened fraud prevention by developing anti spoofing systems that use depth estimation and texture based models, lowering fraud identification acceptance rates for static images and replay attacks by 37%.

### OveoAI | Software Engineer Intern

May 2025 – Aug 2025

- Developed claim denial prediction models; Extracted and transformed data from multiple vendors using Python, PostgreSQL
- Built models that detect insurance claim denials, automatically classify the denial reason, and generate suggestions for corrected resubmission; improved accuracy by 8% by incorporating payer rules and coding compliance checks.

## PROJECTS

### Orderbook

C++, MySQL [GitHub](#)

- Built a C++ limit orderbook modeling exchange microstructure with price time priority queues and event driven state updates
- Implemented bid and ask matching using custom comparators to reduce fill latency and support microsecond processing.
- Simulated market style order flow including limit, market, and cancel events to observe execution priority changes, queue reordering, liquidity formation, and resulting updates to book state across varying order conditions.

### Automated Financial Analytics Engine

Python, Scikit-learn, Gemini 2.0 Pro, FastAPI, Redis, PostgreSQL, HTML | [GitHub](#)

- Created a full data pipeline ingesting real financial data from a Plaid API into a FastAPI backend, Python, *PostgreSQL*, including concurrent batch processing and redis streaming for low latency updates to improve ingestion throughput by 4x.
- Implemented regression and time series forecasting models alongside volatility, sharp ratio, beta, drawdown, VaR/ES, and monte carlo simulations, to automate financial analytics, achieving under 8% prediction error on test data.
- Integrated LLM layer that converts raw transaction and portfolio data into interpretable insights, enabling natural social queries for anomaly detection, risk exposure, and allocation optimization, reducing manual financial analysis by over 60%.

## SKILLS

**Languages:** Python, C/C++, Java, Assembly, SQL

**Frameworks & Tools:** Docker, Kubernetes, Git, FastAPI, Flask, Linux, PostgreSQL, MySQL, MongoDB

**Machine Learning:** PyTorch, Tensorflow, Keras, Scikit-Learn

## AWARDS

### Lewis University Achievement Scholar

- Awarded by Lewis university \$40,000 scholarship offer for 500 recipients out of 5000+ applicants studying engineering or computer science at a 4-year college or university based on my previous academic success and leadership.
- **Dean's List** | Fall 2025, Spring 2025, Fall 2024, Spring 2024, Fall 2023

### Phi Theta Kappa Scholar

- Invited by Private Honor Society, reserved for top 10% of achieving students, granted \$1k annually.

### Academic Excellence Award

- Awarded for academic and technical performance within the Computer Science program.