

## Summary

Results-driven GRC Automation Engineer with 4+ years of experience in IT audit, cybersecurity, full-stack development, and machine learning. Specialized in translating regulatory requirements (NIST, PCI-DSS, NGCB-MICS, FedRAMP/CMMC) into automated technical controls using Python, SQL, machine learning, and cloud technologies. Proven ability to reduce risk, automate audit processes, and bridge compliance, business, and engineering teams to deliver practical, scalable solutions.

## Work Experience

### MGM Resorts International

#### GRC Automation Engineer

Las Vegas, NV: 12/2025 – Present

#### Senior Internal Auditor – IT

Las Vegas, NV: 07/2025 – 12/2025

- Developed Power Automate workflows that reduced week-long manual compliance and audit tasks to under one hour.
- Built a custom Python application and agent that automated complex data transformation tasks, eliminating the need for expensive licensed software and saving the IT Audit and Compliance teams tens of thousands of dollars.
- Designed automated spreadsheets and advanced audit workbooks that enabled population-wide audits and reduced previously day-long tasks to minutes, significantly increasing team productivity.

#### Full-Stack Developer (Contract) - UpToStudy

Las Vegas, NV: 10/2024 – 07/2025

- Led full-stack development of a student productivity web application using HTML, CSS, JavaScript, PHP, and MySQL.
- Designed and managed the backend architecture, including database schema design, user authentication, and core application features such as calendar integration, study tracking, and goal management.

#### Financial Systems Analyst - CleanSpark, Inc.

Las Vegas, NV: 01/2024 – 08/2024

- Administered the company's ERP system and built custom dashboards and reporting tools to improve visibility across financial and IT systems.
- Created the company's first centralized user access log and enhanced IT audit evidence collection through advanced querying and automation techniques.

#### Senior Auditor - Deloitte

Las Vegas, NV: 10/2021 – 10/2023

- Led planning, execution, and team management for SOX financial audits of multiple publicly traded clients.
- Automated spreadsheet reconciliation and testing processes, significantly reducing manual effort and improving audit efficiency.

## Education

### University of Nevada, Las Vegas (UNLV) - Las Vegas, NV

MBA in Management Information Systems - May 2026

Graduate Certificates: Cybersecurity & Business Analytics - May 2026

### California State University, East Bay (CSUEB) - Hayward, CA

Master of Science in Accountancy - December 2019

### University of California, Davis - Davis, CA

Bachelor of Arts in Economics - Data Analytics Specialization - June 2017

## Portfolio

### Professional Site

### GitHub

## Skills

### Programming Languages

- Python
- JavaScript
- Java
- C++
- PHP
- R

### Data & Analytics

- SQL (Query Optimization)
- Dashboard Development
- Spreadsheet Automation

### Infrastructure & DevOps

- Terraform (HCL)
- AWS
- Policy-as-Code

### Compliance & Security

- NIST
- PCI-DSS
- NGCB-MICS
- SOX ITGCs/CUECs
- CMMC/FedRAMP exposure

### Automation & Tools

- Power Automate
- BlinkOps
- Machine Learning / Deep Learning

## Certifications

- CISA
- CEH
- CompTIA Tech+
- Splunk Power User
- Microsoft Azure AI Fundamentals (AI-900)
- AAIA (in progress)
- CompTIA Security+ (in progress)

## Projects

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### ScratchNet – Neural Network from Scratch for PII Detection

- Designed and implemented a neural network entirely from scratch using only NumPy (no high-level frameworks) for binary classification of documents containing Personally Identifiable Information (PII).
- Processed and vectorized synthetic PII text data using **GloVe 6B 300-dimensional** word embeddings from Stanford.
- Applied several best practices for training stability and performance, including **He initialization**, **ReLU** activation functions, **Dropout** regularization, **Weighted Binary Cross-Entropy** loss to handle class imbalance, and **L2 regularization**.
- Conducted iterative model development with careful tracking of training dynamics, loss curves, and overfitting mitigation techniques.
- Achieved **93.3% test accuracy**, successfully identifying **21 of 22** masked PII documents and **7 of 8** unmasked PII documents, demonstrating strong generalization on unseen data.

### Fraud Detection – Feature Engineering & LightGBM Modeling

- Led a feature engineering-focused project on the IEEE-CIS Fraud Detection dataset to identify high-signal features for tabular fraud detection.
- Engineered numerous binary presence/absence features after discovering that missing values often carried strong fraud signals; created additional features including transaction timing (hour), email domain groupings, and device information groupings.
- Applied rigorous fraud rate analysis to guide feature selection and transformation across transaction and identity datasets.
- Built and evaluated a **LightGBM** model using Stratified 5-Fold Cross-Validation with native categorical handling and early stopping.
- Achieved **0.8506 OOF CV AUC**, with several engineered features ranking among the top predictors by feature importance.

### Stock News Sentiment vs. Price Analysis

- Investigated the relationship between stock news sentiment and price movements using both **FinBERT** and **VADER** on the top 10 tickers by news volume from a Yahoo Finance dataset.
- Processed nested news text data, generated daily sentiment aggregates, and compared them against daily, intraday, and next-day returns across a one-year period.
- Applied Savitzky-Golay smoothing to time series visualizations, revealing clearer patterns between sentiment and returns than Pearson correlations alone indicated.
- Explored lead-lag dynamics and found evidence of bidirectional influence between news sentiment and stock prices, varying by ticker.
- Automated large-scale graph generation (120+ visualizations) and appendix creation to support analysis and reporting.

### UpToStudy – Student Productivity Platform

- Developed a full-stack web application using HTML, CSS, JavaScript, PHP, and MySQL to help students manage courses, assignments, study sessions, and academic goals.
- Key features include a dashboard, interactive calendar, flashcard and multiple-choice study system with progress tracking, goal setting, support ticket system, and email verification.
- Deployed on and maintained on AWS Lightsail.

## Awards & Competitions

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### Data4Good 2024 Competition

Earned 1st Place regionally and Bronze nationally in the graduate division as part of a team using data and AI to address social issues.

## Student Organizations

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### UNLV Cyber Clinic – Vice President

Former intern, Compliance Officer, and now the Vice President of the UNLV Cyber Clinic, a student-led initiative at the University of Nevada, Las Vegas, where students provide no-cost cybersecurity assessments and education to small businesses, addressing risks like hacking and phishing. Participants gain hands-on experience, earn certifications (e.g., CompTIA Security+), and engage in events like DEFCON and various CTFs.