

# ANDREW WAYNE HAYLES

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## Professional Summary

Analytically minded professional with a background in Chemical Engineering and 10+ years of experience in technical instruction and complex problem-solving. Leveraging a strong foundation in statistics, mathematics, and programming. Proven ability to analyze data by leveraging statistical modelling and machine learning, develop predictive models, and communicate complex technical concepts to diverse audiences. Also strongly concerned with model validation. Recently completed a Data Science and Databases with SQL and Python course with a perfect score. Future courses include more Python, Machine Learning usage, and Generative AI. Utilize Github for version control.

## Technical Skills

- **Languages:** Python, SQL, C# (Basic)
- **Python Libraries:** Pandas, NumPy, Matplotlib, Scikit-learn
- **Databases:** Experience with SQL database queries for data retrieval and manipulation.
- **Tools & Software:** MS Excel (Advanced), Honeywell Experion, Process Control Systems (DCS/PLC), Power BI
- **Core Competencies:** Statistical Analysis, Data Visualization, Predictive Modeling, Process Optimization, Root Cause Analysis, Technical Communication

## Data Analysis Projects

### Chess Performance Analysis using Linear Regression

- Analyzed a dataset of 84 personal games from chess.com to identify factors influencing win probability. Utilized python and pandas for exploratory analysis.
- **Tools Used:** Python, Pandas, Scikit-learn

### Exploratory Data Analysis of Health & Psychometric Data

- Collected, integrated, and analyzed two distinct datasets: daily health metrics (blood pressure, heart rate, stress) from a tracking watch and ~400 data points from experimental high-range intelligence tests.
- **Tools Used:** Python, Pandas, NumPy, Matplotlib, Power BI

## **Yelp Academic Dataset Exploratory Analysis**

- Cleaned and imported the data into SQLite using Python. Created a metric to identify most improved businesses using SQL
- Used SQL to analyze user reviews of strongly rated businesses and poorly rated businesses
- Identified actionable plan for improving businesses that are performing poorly and maintaining businesses that are performing well
- **Tools Used:** SQLite, Google Docs

## **Professional Experience**

### **Tutor | WyzAnt (Online) | 2014 – September 2025**

- Analyzed student performance data to create personalized learning plans, resulting in measurable improvements and a consistent 5.0/5.0 rating across over 300 reviews.

### **Simulation Specialist | GP Strategies | Aug 2012 – Feb 2014**

- Managed a high-fidelity control system for a Department of Defense training program, ensuring data integrity and system reliability for all users.

### **Field Service Specialist | Honeywell Process Solutions | Oct 2009 – Aug 2012**

- Performed root cause analysis on control system failures to implement solutions.

### **Engineer I | TTM Technologies | Jul 2008 – Mar 2009**

- Managed and optimized the solder mask process, analyzing production data to ensure product quality and improve manufacturing yield.

## **Education & Certifications**

- Statistics with Python Specialization (2025)  
University of Michigan (via Coursera.org)
- Learn SQL Basics for Data Science (2025)  
UC Davis (via Coursera.org)
- Bachelor of Science, Chemical Engineering (2008)  
University of Washington, Seattle, WA
- CompTIA A+ Certified
- E.I.T. (Engineer in Training) License  
NCEES
- TESOL/TEFL Certificate (World TESOL Academy) - 2025