

# Christopher McKenzie

chris.mcke876@gmail.com | [LinkedIn](#) | [GitHub](#)  
New York, NY

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## Education

B.S. in Computer Science  
*Western Governors University — September 2025*  
B.S. in Mechanical Engineering  
*University of Delaware — May 2021*

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## Career Objective

Computer Science graduate and Mechanical Engineer pivoting to data science / ML. Hands-on with Python, Django, and scikit-learn; experienced in building data pipelines, training and evaluating models, and visualizing results. Seeking entry-level data science / ML roles.

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## Technical Skills

Languages: Python, Java, C++  
Data & ML: pandas, NumPy, scikit-learn, Matplotlib, Seaborn, model development, train/test  
Backend & Web: Django, REST patterns, HTML/CSS  
Databases & Tools: SQLite, PostgreSQL, MySQL, Git, Docker, PyCharm/IntelliJ, PyTest  
Foundations: Data structures and algorithms, Big-O analysis

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## Projects

### **Tennis Match Prediction Model | Python, Django, scikit-learn, Matplotlib, pandas, NumPy**

<https://github.com/chalrees876/tennisPrediction>

- End-to-end web app that stores match data in Django, engineers features with pandas, trains a logistic-regression baseline in scikit-learn, and displays evaluation charts and per-match win probabilities in the UI.
- Designed relational models for players, tournaments, and matches with integrity constraints and efficient queries.
- Built a Python pipeline with pandas/NumPy; trained with reproducible splits and generated evaluation artifacts.
- Implemented model persistence and an inference path to surface predictions alongside match records.

### **Optimized Package Delivery System | Python, Hash Tables, Algorithm Design**

<https://github.com/chalrees876/Truck-Delivery-Optimization>

- Implemented a package-delivery routing solution using a greedy nearest-neighbor heuristic over a graph of addresses.
  - Built a custom hash table for fast package lookups and updates; analyzed average/worst-case behavior and collisions.
  - Represented the road network with adjacent lists and a precomputed distance matrix.
  - Performed Big-O analysis, instrumented runs, and documented trade-offs versus exhaustive search.
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## Professional Experience

### **Mechanical Engineer II**

SSOE — New York, NY | Feb 2022 – Present

- Design HVAC and piping systems for manufacturing facilities, focusing on energy efficiency and cost reduction.
  - Conduct system simulations and static pressure calculations to validate performance
  - Coordinate with software and architectural teams, applying cross-functional problem-solving and agile planning.
  - Produce clear technical documentation and present project updates to clients
  - Translate client requirements into actionable engineering and system designs.
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