Charles Bauer

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Education

MS Computational Science and Engineering, Georgia Institute of Technology — *expected May 3, 2025*

BS Industrial Engineering, Georgia Institute of Technology — *December 2023*
GPA 3.89/4.00
- Minor in Computing Intelligence
- Exchange student at National University of Singapore, Spring 2023

Eagle Scout, Northeastern Illinois Council Troop 64, Northbrook, IL — *September 2019*

Skills

Programming:	Python, SQL, Julia, C, C++, C##, Java, JavaScript, R, MATLAB, Stata, SAS
Python:	OpenAI, Llama, Tensorflow, PyTorch, Keras, Pandas, PySpark, Gurobi, DEAP
Database Management:	GCP, Oracle, Teradata, Snowflake, Azure, AWS, Red Hat, Git
Data Visualization:	Excel, Power BI, Tableau, ThoughtSpot, Jupyter

AI/ML Experience

Data Automation Intern, Elevance Health, Atlanta, GA — *May – October 2024*
- Deployed OpenAI use-case to production in OpenShift, ran on 4 million claims
- Automated payment decisions with pattern matching and 5 Llama prompts
- Analyzed performance and user efficiency of claims adjudication software
- Proposed stochastic optimization model for examiner allocation and model for dynamic claim assignment depending on inventory and urgency score

Data Science Capstone, Power Utility Products Co., Remote — *May – December 2023*
- Built data model for potential demand in new markets
- Determined 2 new warehouse locations with integer programming
- Reevaluated inventory ordering policy for 17,000 SKUs

Data Engineering Intern, Beam Suntory Inc., Chicago, IL — *May – August 2022*
- Forecasted demand with classical, Bayesian, and deep learning methods
- Scripted queries for business clients in Google Cloud Platform

Data Analytics Intern, Beam Suntory Inc., Chicago, IL — *May – August 2021*
- Launched Power BI data visualization software for IT and business users
- Convinced IT leadership to transfer 6 developers from Tableau

Research

Automated Algorithm Design, Georgia Tech Research Institute — *August 2021 – May 2022*
- Studied evolutionary algorithms on neural networks for image classification
- Designed speciation mechanism that broadened pareto-optimality

Teaching

Math Tutor, Wyzant — *December 2022 – Present*
- Statistics, Linear Algebra, Machine Learning, Stochastic Processes, Excel

Content Creator, Blog   YouTube — *January 2025 – Present*
- Regression, Classification, Probabilistic Models, Optimization, Natural Language Processing (NLP), Large Language Models (LLM), GenAI

Teaching Assistant, Georgia Institute of Technology — *August 2021 – May 2024*
- Probability, Statistics, Data Analytics
- 2022 Industrial Engineering Undergad TA of the Year