

Zachary Dawson

M.S. CS (ML), Georgia Tech — 2024–Present

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Experience

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- Data Engineer (part-time)**, Learning Analytics Lab, Georgia Tech – Atlanta, GA Aug 2025 – Present
- Develop and maintain an Azure-based learning-analytics platform: integrate new data sources, build PySpark ETL, contribute Terraform IaC and developer-experience improvements, and support dashboards/interactive visuals.
- Senior Data Engineer**, Global Atlantic Financial Group – Brighton, MA Sept 2021 – May 2024
- Migrated 200+ Control-M jobs to AWS Glue with Terraform, enabling infra-as-code deployments and reducing manual scheduling.
 - Introduced the company's first ML model (cosine similarity + random forest) to detect duplicate contacts, improving accuracy by 10% vs. rules-based matching.
 - Built an automated test framework for database and stored procedure migrations (Python + CI), replacing manual checks and catching regressions pre-deploy.
 - Integrated Salesforce Bulk API to read/write prospects, adding 5,000 new records to Salesforce and the enterprise data warehouse with auditability.
 - Migrated annuity CRM data to the in-house warehouse to enable enterprise reporting at scale (700,000 policies; \$40B in transactions).
 - Automated commission allocation service used by sales ops to reconcile and split \$5M+ in payouts.
- Bioinformatics Co-op**, MIT BioMicro Center – Cambridge, MA Jan 2020 – June 2020
- Improved and monitored next-gen sequencing pipelines; ensured timely delivery of 2–4 TB/week of data.
- Server/SRE Co-op**, Skillz Inc. – San Francisco, CA Jan 2019 – June 2019
- Created load-testing infrastructure and delivered weekly production/staging performance reports to engineering leadership.

Education

Georgia Institute of Technology | M.S. CS (ML) | GPA: 4.0 Aug 2024 – Expected May 2026
Northeastern University Honors Program | B.S. CS | GPA: 3.7 Sept 2017 – May 2021

Technical Skills

Languages: Python, SQL, Scala, Java, Bash
ML/Stats: PyTorch, scikit-learn, PyMC, Pandas, NumPy, SciPy
Data/Orchestration: Spark/PySpark
Cloud & IaC: AWS (S3, Glue, Redshift, Lambda), Terraform
Other: Git, Linux, MySQL, Jenkins, Jupyter

Projects

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- Bayesian Golf Handicapping** zachwdawson.github.io
- Developed a fairer golf handicapping system using Bayesian methods to better predict future golf score distributions.
 - Achieved a win-rate gap to uniform of 7% vs. 10% for existing USGA handicapping.
- Golf Swing Action Recognition** zachwdawson.github.io
- Improved frame-level golf swing labeling with 3D CNNs and custom loss functions.
 - Attained frame-level PCE of 81.6% vs. 76.1% baseline.