

Owain West

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Owain is ideal for high-velocity roles, bringing particular expertise in data engineering, NLP, ethical AI, and value-driven project delivery.

Experience

Beyond Identity | Data Engineer II

New York | May 2024-Present

- Authored high-performance Rust (Axum) server for SIEM configuration, enabling numerous outbound event integrations in BI's Secure Access platform (eg Elasticsearch, Splunk, Datadog, MS Sentinel).
- Optimized kafka consumers for SIEM forwarding, leading to a 95% drop in p95 processing latency across numerous key tenant customers.
- Conducted security analyses to ensure FedRamp compliance of developed code and infrastructure; BI exceptionally achieved FedRamp Moderate Authorization within only 10 months.
- Developed stream-processing based threat-signal models as Policy Integration Points (PIPs) in a zero-trust authentication architecture, eg for IP novelty and travel speed.

TickPick | Leading Data Engineer

New York | May 2022 - May 2024

- Led TickPick's Data Engineering initiatives using Snowflake, Databricks, and Azure ML; orchestrating data flows across thousands of tables.
- Pioneered automated ticket transfers, fundamentally enabling "autotransfer" app feature launch which drove >\$10 Million revenue in Y1.
- Led technical implementation of margin optimization pipe, impacting \$200M+ inventory, boosting relative conversion rate by 10%.
- Automated pricing comparisons against 100k+ competitor listings daily, reinforcing company's "price dominance" strategy.
- Transitioned from Airflow to Databricks ETL, lowering costs by over 70% while ensuring reliability and engineering efficiency.
- Mentored junior engineers while managing 400+ data pipelines loading hundreds of millions of rows monthly.
- Integrated Snowflake with Azure ML via SQL from dbt, enabling data analyst access to ML features.
- Negotiated with ETL vendors, reducing annual costs by over 70% through strategic selection and cost-benefit analysis while retaining agility.
- Created Streamlit user interfaces for stakeholder data access, streamlining data-driven decision-making.
- Integrated MLflow with Azure ML and DVC, elevating MLOps by ensuring model consistency and enhancing reproducibility.

Thinknum Alternative Data | Jr Data Engineer

New York | Jan-Mar 2022

- Developed ETL pipelines for web data extraction, eg info on >5mil Stackexchange users. Authored ORM parsers for Schema.org metadata.
- Resigned due to ethical concerns over military data scraping during Ukraine conflict.

University of Waterloo | CS Teaching Assistant; CS 135, CS 245, CS 330 (3x). 1/sem.

Waterloo | Sep 2019 - Dec 2021

- Instructed business-relevant data engineering and analytics methodologies in CS 330, with focus on data modelling and orchestration.

Royal Bank of Canada, Toronto Innovation Lab | Software Engineer Summer Hire

Toronto | May-Aug, 2017-2019

- Patented NLP and computer vision system for financial document analysis: <https://patents.google.com/patent/US11403465B2/en>.
- Developed natural-language interface for RBC market research, facilitating cross-vertical collaborations.
- Designed proof-of-concept conversational interfaces for onboarding and benefits selection, ultimately refined and adopted company-wide.

University of Pennsylvania | Head Teaching Assistant; LGIC 010

Philadelphia | Jan-May, 2017-2019

- Coauthored course **textbook** (free at <https://cis.upenn.edu/~weinstei/PQT.pdf>). Led TA team and curriculum development.

UPenn Student Federal Credit Union | Supervisory + Information Systems Committees

Philadelphia | Sep-May, 2016-2018

- Conducted regular audits for Federal banking compliance. Advised on the SFCU's digital infrastructure and web presence.

Education

University of Waterloo | MMath | Computer Science

Waterloo | Sep 2019 - Dec 2020

- **Selected graduate coursework**, $\geq 90\%$ (equiv. **A+**) grade: **Fairness, Accountability, and Transparency in Machine Learning**; **Machine Learning in Proteomics**; Automatic Sequences; Computer-Aided Verification

University of Pennsylvania | BA, Magna Cum Laude | Triple Major

Philadelphia | Sep 2015 - May 2019

Logic, Information, and Computation; Computer Science; Philosophy and Science

- **Selected graduate coursework**, $\geq A$ grade: **Logic and Computability**; **Networked Systems**; Topology; Finite Model Theory
- Was selected as LGIC (Logic, Information, and Computation) departmental Convocation flagbearer in recognition of academic standing.

Expertise

- **Languages, Tools, and Clouds**: Julia, Python, SQL, NodeJS, C, K, OCaml, Java, Kotlin, Rust, • AWS, Azure, GCP • Docker, Kubernetes, Helm, Terraform, Kafka, Grafana
- **NLP**: LLMs, GPT, BERT, NLTK, spaCy, Conversational Design
- **AI/Machine Learning**: Pandas, NumPy, PyTorch, scikit-learn, Flux (Julia), Kubeflow, DVC, MLFlow, Spark, OpenCV, YOLO
- **Ethical AI**: ML fairness and dynamics (see https://owainwest.com/fairness_dynamics.pdf), LLM safety, Fairlearn, Fairness360
- **Data Engineering and Analytics**: Airflow, Dagster, dbt, Snowflake, Spark, Singer.io, Airbyte, ADF, GraphQL, PostgreSQL, Redis, Streamlit, Looker, Superset
- **Misc**: **Web Development**: Django, Flask, React, FastAPI • **Conversational interfaces** Dialogflow, Alexa • **Proteomics**: Applied LLMs (eg alphafold), BLAST, Uniprot • **Formal methods**: TLA+, Lean4 • **Business systems** Adjust, Iterable, Zendesk • **Other** Technical writing, \LaTeX , Pandoc