

Owain West

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A dynamic, analytical mind and strong communicator, Owain is ideal for technically, intellectually, and interpersonally demanding roles. See owainwest.com to learn more.

Experience

TickPick | Data Engineer

New York | May 2022 - Present

- Leading TickPick's Data Engineering initiatives, architecting and implementing solutions to orchestrate data flows through the organization.
- Directing operation of critical data infrastructure including **Airflow** and **Snowflake**. Developed complex data and **MLOps** flows integrating these tools with other platforms such as **Azure ML**, **dbt**, **Databricks**, and **Looker**, leveraging **Azure Functions**, **Docker** and **Kubernetes** deployments.
- Mentoring direct report Jr. Data Engineer, and serving as the leading technical resource within the Data team with exceptional proficiency.
- Architected and developed over 250 data and MLOps pipelines, leveraging cutting-edge tools to tackle intricate data sources. Eg automated the integration of detailed Apple "App Store Connect" referrer data, which is inaccessible through the documented API.
- Developed a Snowflake external function integration enabling seamless access to **ML** and **NLP** capabilities directly within SQL-based data tooling such as SnowSQL and dbt. Wrote and deployed unsupervised learning techniques (e.g., GMMs, KMeans), supervised learning algorithms (e.g., KNeighbors, regressors), and standard NLP utility functionality (e.g., document similarity, NER, and tagging).
- Architected novel process to automate acceptance of externally delivered tickets, enabling high-value "autolist" application feature.
- Directed contacts with multiple SaaS vendors and consolidated tooling, resulting in >50% savings in expected spend while improving reliability.

Thinknum Alternative Data | Junior Data Engineer

New York | Jan-March 2022

- Built dozens of ETL pipelines for extraction of open web data, including eg. to ingest detailed info on >5mil top Stackexchange users.
- Elected to resign on ethical grounds after being asked to scrape military-related data to sell, and before the company failed to pay its employees.

University of Waterloo | CS Teaching Assistant

Waterloo, CAN | Sep 2019 - Dec 2021

CS 135 (DESIGN OF FUNC. PROGRAMS), CS 245 (LOGIC + COMPUTATION), CS 330 (MANAGEMENT INFO SYSTEMS). 1/SEM.

- Communicated effective feedback to students, graded evaluations, aided in student instruction, and gave input for course development.

University of Pennsylvania | (Head) Teaching Assistant

Philadelphia | Jan-May, 2017-2019

LGIC 010 (INTRO FORMAL LOGIC – TA 2017, HEAD TA 2018+2019); CIS 160 (DISCRETE MATH FOR CS – TA 2018)

- For LGIC 010: **coauthored textbook** for use in class, available freely at <https://cis.upenn.edu/~weinstei/PQT.pdf>. As Head TA in 2018, 2019: lead other TAs and developed curriculum.
- For both: taught weekly recitation and office hour sessions, graded evaluations, and communicated feedback about course development.

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

Toronto, CAN | May-Aug, 2017-19

- **2019**: Recieved **patent**: <https://patents.google.com/patent/US11403465B2/en> for **NLP** and **computer vision** work underlying the described financial document information extraction system. Continued development of internal conversational applications, including production version of previously instigated projects. Developed system for automated evaluation of semantic quality of text summarizations.
- **2018**: Designed + developed PoC system providing conversational interface to NLP-based summarization of investment analysis, and enabled necessary **data integration**. Developed a machine-vision based table parser. Independently designed and built novel conversational interface for employee benefits selection. Interviewed external software firms to join self-instigated internal projects, including the aforementioned.
- **2017**: Designed and built a chatbot to automate developer onboarding. Championed internal work in applied NLP and internal use of Alexa and Google Home. Developed standards for graph-based design in **prompt generation** for **conversational interfaces**.

UPenn Student Federal Credit Union | Supervisory + Information Systems Committees

Philadelphia | Sept-May, 2016-2018

- Enacted regular audits to comply with Federal regulations. Troubleshoot and consulted on the SFCU's digital infrastructure and web presence.

Bridge: Freshman Mental Wellness | Founder, Co-President

Philadelphia | Sep 2015 – May 2017

- Lead Bridge, a student organization at UPenn that provided peer-based mental health support for freshmen. The organization's founding and impetus was described in <https://www.thedp.com/article/2015/07/mental-health-helpers-2019-facebook-group>.

University of Pennsylvania | (Senior) Information Technology Advisor

Philadelphia | Sep-May, 2015-2017

- Solved network and security problems for university members. As senior ITA in Sept-May 2016-17, directed and taught other ITAs.

Skills

- **Personal**: Communication • Analytical Reasoning • Quantitative thinking • Leadership • Empathy • Teamwork • Independent work • Research
- **Languages**: Julia • Python • SQL • NodeJS • K • OCaml • Rust • TLA+ • Lean 4 • **Clouds**: AWS, Azure, GCP • **NLP**: NLTK, spaCy, BERT, GPT, LLMs, Prompt Generation, Conversational Design • **Machine Learning and Data Science**: Pandas, NumPy, PyTorch, scikit-learn, Keras, Tensorflow, Flux (Julia), Spark, **ML Ethics** (please see https://owainwest.com/fairness_dynamics.pdf) • **Data Engineering** Airflow, Dagster, dbt, Snowflake, Databricks (Spark), Fivetran, Hightouch, Stitch, Airbyte, Azure Data Factory, PostgreSQL, Redis, MongoDB • **Dashboard**: Looker, Tableau • **Infrastructure**: Docker, Kubernetes, Azure DevOps, Github Actions, Azure Functions, AWS Lambda, Azure Container Services, GCP Cloud Functions, GCP Pub/Sub • **Web framework**: Django, Flask, React • **Proteomics**: Applied LLMs, BLAST, Uniprot • **Other**: Unix, Git, Bash

Education

University of Waterloo | MMath in Computer Science

Waterloo, CAN | Sep 2019 - Dec 2020

- **Selected graduate coursework**, $\geq 90\%$ (equiv. **A+**) **grade**: Advanced Topics in AI (**Fairness, Accountability, and Transparency in ML**); Adv. T. in Bioinformatics (**Machine Learning in Proteomics**) Adv. T. in Algos. and Complexity (Automatic Sequences); Computer-Aided Verification

University of Pennsylvania | BA, Magna Cum Laude | 3 Majors

Philadelphia | Sep 2015 - May 2019

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

- **Selected graduate coursework**, \geq **A- grade**: Intro Logic and Computability; Topics in Logic (Modal Logics); Topics in Logic (Set Theory); Differential Geometry; **Networked Systems**; Topology; Finite Model Theory and Descriptive Complexity; Topics in Cosmology (Galactic Dynamics)
- Was selected as LGIC (Logic, Information, and Computation) departmental Convocation flagbearer in recognition of academic standing.