# Andrew Parry

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#### Education

University of Glasgow, PhD in Computer Science

Oct. 2022 to 2025

• Bloomberg Fellow, Research in Neural Search Robustness & Efficiency

University of Glasgow, Bsc (Hons) in Computer Science

Sept. 2018 to June 2022

- 1st Class Honours
- Coursework: Artificial Intelligence: A, Machine Learning: A, Deep Learning: A, Big Data: A, Text as Data: A, Information Retrieval: A, Functional Programming: A.

### **Selected Publications**

[ACL 2024 Findings] Exploiting Positional Bias for Query-Agnostic Generative Content in Search Andrew Parry, Sean MacAvaney, Debasis Ganguly	2024
[SIGIR 2024] Axiomatic Guidance for Efficient and Controlled Neural Search Andrew Parry	2024
[SIGIR 2024]"In Context Learning" or How I learned to stop worrying and love "Applied Information Retrieval" Andrew Parry, Debasis Ganguly, Manish Chandra	2024

#### **Awards**

Bloomberg Data Science Fellowship: Awarded 2024-2025 Cohort

**SIGIR 2024 Travel Grant:** Covers registration and travel fees.

Lead on TREC Deep Learning 2023: 3rd Overall in TREC Deep Learning 2023.

Full PhD Scholarship: Awarded by the School of Computing Science.

## **Experience**

Research Assistant, University of Glasgow – Glasgow UK

May 2022 to Sept. 2022

- Applying variational inference and augmentation for low information classification.
- PI: Dr. Debasis Ganguly

Data Analytics Intern, Waterstons Consulting – Durham, UK

June 2021 to Sept. 2021

- Handled full development of a production-ready vision model and interface with a client representing a large logistics company. Feedback from my client was excellent.
- Created dashboards delivering KPIs and graphs for HR tasks and goals integrated with an HR database to reduce workload, updating senior management.

**Teaching Assistant, Graphic Designer**, Digital Skills Scotland – Glasgow, UK

June 2015 to Sept. 2021

- Created banners for lessons catching the attention of Edinburgh University, with whom I created banners for a talk and workshop at their science festival. Provided resources for the National 5 Computing Web Design teaching component.
- Worked with children and young adults from disadvantaged areas to help them develop an interest in programming and wider technology, such as hardware, including Arduino and Raspberry Pi computers.

# **Technologies**

Languages: Python (fluent, 10+ years), R(prior experience), Java(proficient), SQL (proficient)

**Software:** Pytorch (4 years), Tensorflow (5 years), Jax, Spark (Java & Python exposure), Kubernetes Workflows (3 years), Docker (3 years), Postgre, Power BI, FastAPI

## **Projects**

LSRChain Apr. 2024

• Collaborative effort to improve the viability of sparse retrieval in production.

Rankers Feb. 2024

• IR components for training neural ranking models wrapping transformers and torch.

PyTerrier List-Wise Feb. 2024

• Terrier bindings for LLM-based re-rankers.

LightChain Sept. 2023

• Efficient program chaining for generative agents.

• Following the PyTerrier paradigm.

PyTerrier GenQR Sept. 2023

• Replication of generative query reformulation with PyTerrier bindings.

## **Mentoring And Supervision**

## **Undergraduate Mentoring**

Jan. 2023

• YanLing Liu – Now: Msc Computing Science

• Rajan Rana – Now: Startup Founder

#### **Postgraduate Co-Supervision**

2023 to 2024

- Rachael Charmaine Martin *In-context learning for classification* Now: Industry Position
- Hallton Jiao *Hard negative selection for dense retrieval* Now: Industry Position
- Haodong Ma *In-context learning for ranking* Now: Industry Position
- Vishakha Suresh Kalal The effect of contamination on ranking distillation Now: Graduation imminent

#### **Academic Service**

TREC: Team Lead on Deep Learning Track 2023 (3rd Place)

Internal: Organiser of the Terrier Special Interest Group in Generative IR, Maintenance of internal LLM APIs

Marking: Text as Data (MSci), Machine Learning (BSc Hons)

Reviewer: Springer Nature Computer Science, NeurIPS'23, SPIRE'23, ECIR'24, SIGIR'24, ACL'24, TOIS

Assistant Reviewer: KDD'23, WWW'23, ICTIR'23, CIKM'23