

# Patrick Lewis BA MSci

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## Education

2012-16 **Queens' College Cambridge: BA MSci Natural Sciences (1<sup>st</sup> Class)**

Part 3: Physical Chemistry & Data/NLP Project

Part 2: Physical & Theoretical Chemistry, Statistical Mechanics

Part 1: Computer Sciences, Materials Sciences, Chemistry & Mathematics

2007-12 **Epsom College, Epsom**

A Level: Maths (A\*) Further Maths (A) Physics (A\*) Chemistry (A\*)

AS Level & EPQ: Philosophy of Religion (A) Critical Thinking (A) EPQ(A\*)

GSCE: 10 grade A\* including Maths, English and IT.

## Work / Experience

2018- **FAIR PhD Student:** Affiliated with University College London and Facebook AI Research. Exploring techniques to better exploit "external" language / knowledge in neural NLP systems

2018-18 **Bloomsbury AI:** ML Engineer. Researching & developing cutting edge NLP techniques for question answering & knowledge dissemination. Translating & scaling world-leading AI research into production environments.

2016-18 **Healx Ltd:** NLP Analyst building deep learning models for NER & relation extraction. Creating semantic representations from structured & unstructured data sources. Constructing & analysing biological networks. Building KBC models to predict repurpose-able drugs for rare diseases.

2015-16 **MSci Data Science project:** Developing novel algorithm to recommend academic collaborations & demonstrate unsupervised scientific concept learning using web scraping, neural embeddings & network analysis.

2014 **BAE Systems Applied Intelligence (formerly Detica):** 12-week internship on prototype redesign of mission critical system. Responsible for technology choice, architecture, implementation & presentation to stakeholders.

2013 **BAE Systems Detica:** 12-week internship on independent research project developing novel modeling software using newly published techniques, to enable more accurate circuit design.

2013 **Credit Suisse Spring Program:** Training program for a technical role within Credit Suisse I.T. department.

2010 **Expedition to Zambia:** Renovating village schoolhouse, substantial repair work & weatherproofing.

## Relevant Skills

**Coding:** Preferred: Python (Numpy, Pandas, Sklearn, Tensorflow, Pytorch, Gensim, NLTK, sPacy)

Prior Experience: JS, JQuery, HTML+CSS, Java, MATLAB, C#, SML

**Other:**  $\LaTeX$  typesetting, Gephi network suite, AWS EC2 & S3, Familiar with Mac OS X, Linux & Windows, SC vetted & cleared in 2013 & 2014, Full UK Driving Licence

## Awards and Commendations

- Cambridge University Department Prize for "Outstanding Master's Project" (2016)
- Queens' College Foundation Scholarship & Paul W Davies Prize for Chemistry (2016)
- Ranked 1<sup>st</sup> = intern at Applied Intelligence (2014), EAL Certificate of "Commendable" performance at Detica (2013)
- School Debating & Public speaking teams, regional finalists & champions respectively. History, Physics, Chemistry, Extended Project & academic excellence awards. (2008-2012)

## Teamwork / Leadership

- President of Milner Society (2014-15): Society for all science-subject students at Queens' College ( $\approx$ 130 students). Managed tutoring workshops, many social events & worked closely with college staff.
- President of Queens' Rugby Club (2014-15): Managed budget, training, social events, safety, kit & administrative duties.
- Head of House (2011-12): Responsible for welfare of 70 pupils, efficient running of house & managing prefect team.
- President of Epsom College Young Cooperatives (2010-11): Led group of 20 teenagers in money-raising schemes for charity, including holding large social events & producing a calendar.

## Interests and Travel

- Play classical & electric guitar. Performed main parts in 4 plays.
- Travel: Backpacking in Vietnam & Europe (2015), Interrail across Europe (2012). Rafting & hiking through Grand Canyon, USA (2011). Expedition to Zambia (2010)