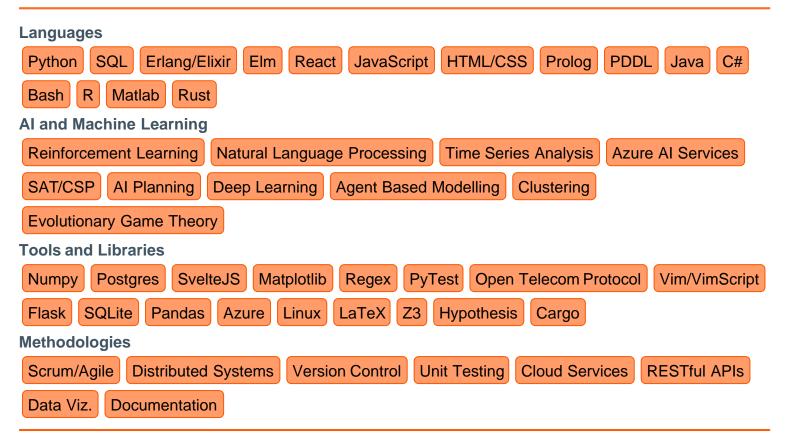
# Jack Pellen-Pickersgill

I'm a developer and teacher with a proven understanding of machine learning and AI. I thrive in challenging, collaborative environments, especially those which provide opportunities for exploring new tools and technologies. I have good research skills having worked on several highly technical projects as well as excellent Python proficiency and experience working in an agile setting.



## **Work Experience**

- STEM Foundation Programming Teacher Royal Holloway University, 2022-24
  - Took on a more leading role running Python programming labs for first year STEM students of mixed backgrounds.
  - Responsibilities also include monitoring student wellbeing, holding pastoral seminars and offering one-to-one sessions for students who need extra help.
- Computer Science Teaching Assistant Royal Holloway University, 2021-24
  - Helped teach several Masters courses on a range of topics including Databases, Programming, Statistics and Machine Learning.
- Software Engineering Placement Royal Holloway University, Summer 2021
  - Worked with a fellow graduate to investigate the feasibility of transitioning our first year robotics course to an open source software platform.
- Undergradute Research Placement Royal Holloway University, Summer 2019
  - Worked in a small team investigating the use of Blockchain technology for supply chain management and carbon tracking.
- Sales Assistant Maplin Electronics, 2016-2017
  - Customer facing role selling consumer electronics ranging from multimedia devices and domestic appliances to discrete components.

# Education

- PhD Student, Distributed and Intelligent Computing Environments Laboratory, 2022-23 Royal Holloway University of London
  - Worked on formalising and implementing Multi-Agent simulations such as distributed task negotiation and evolutionary game theoretic models. Also studied single and multi agent learning tasks. Chose to withdraw due to a change in personal circumstances.
- MSc Artificial Intelligence (Distinction), 2021-22 Royal Holloway University of London
  - Masters Thesis entitled "AI Planning using SAT/SMT and Bounded Model Checking", deriving a perspective of planning tasks as satisfiability problems which could then be encoded and solved by an off the shelf DPLL based solver like Z3. Awarded yearly Outstanding Project.
  - Distributed Systems, studied the fundamental principles of distruted computing networks including Elixir/OTP implementation of the consensus algorithms Paxos.
  - Data Analysis, intensive course covering wide array of Machine Learning techniques using R, Matlab and Python. Implemented ML algorithms such as AHC, Linear Regression and Random Forests from first principles.
- First Class Hons. BSc Computer Science, 2018-21 Royal Holloway University of London
  - Worked as a team of 8 on a fullstack web development project following agile methodology, awarded best team.

### **Projects**

- BigMagnet, Python 2024
  - Python tool for querying and aggregating code datasets. Handles pagination and concurrent execution of large request queries before downloading and extracting relevant files.
  - Originally intended to be used for generating a large Rust dataset for LLM tuning then extended to handle a range of search query parameters.
- WAMM (WhatsApp Markov Models), Python 2022
  - Trains a word level n-gram Markov Model using raw WhatsApp chat history data. Handles both the cleaning and parsing of large history files and statistical analysis of extracted data.
- QBert, Elm, Python 2020
  - Experiments in Multi-Agent task-fulfilment with queueing situated in physical 2d space.
  - Python model which simulates the model and produces log files which can then be parsed by browser based visualizer tool written in Elm.

#### **Hobbies and Interests**

- **Music**, I've been playing bass for just over a decade and have been part of several large and small groups.
- **Sport**, I play football, cycle and have recently started bouldering. When it comes to watching sport I mostly follow football but also try to keep up with rugby union, F1 and baseball.
- Gaming, I love playing games with friends be it tabletop or virtual.
- **Puzzles**, I enjoy puzzles in all their forms. I'm a devout Wordler and Rubik's Cube speedsolver with a PB time of 13.5s.