

# Owen Pauptit

## Headline

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Statistics PhD interested in Bayesian and ecological statistics, looking at uncertainty propagation in biodiversity quantification.

## Education and Research Experience

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**PhD Statistics**, E5 DTP 2025 - 2029 (Expected)

The University of Edinburgh, National Environmental Research Council

- Thesis: Measuring the unmeasurable. Understanding uncertainty in biodiversity metrics
- Supervisors: Dr. Torben Sell, Dr. Hannah Wauchope

**B.Sc (Hons) Computer Science and Mathematics**, First Class 2021 - 2025

The University of Edinburgh

- Dissertation: A Hierarchical Bayesian Analysis of Racial Bias in UK Police Stop and Search
- Supervisors: Dr. David Sterratt, Dr. Vanda Inacio De Carvalho, Prof. Finn Lindgren

**Research Intern**, Mitacs Summer 2024

McGill University

- Project: Ensemble Deep Learning for Genomic Prediction in Common Bean
- Supervisors: Prof. Valerio Hoyos-Villegas, Isabelle Chiaravallotti

**A levels**, Fallibroome High School 2019 - 2021

- Computer Science A\*, Mathematics A\*, Physics A\*, Chemistry A\*

## Publications

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Chiaravallotti, I., Pauptit, O., & Hoyos-Villegas, V. (2025). **Environment ensemble models for genomic prediction in common bean (*Phaseolus vulgaris* L.)**. *The Plant Genome*, 18, e70057. <https://doi.org/10.1002/tpg2.70057>

## Invited Talks

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**Ethnic Bias in England and Wales Police Stop and Search – Can it be Explained by Relative Amount of Crime?**

- Royal Statistics Society, Edinburgh Local Group May 2025
- Institute for Adaptive and Neural Computation April 2025

## Teaching

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**Tutor, Demonstrator and Teaching Assistant** 2023 - Present

The University of Edinburgh

- Lab demonstrator for data science and cognitive science courses up to 50 students
- Tutor for probability and proofs course of up to 30 students
- Development of course materials for data science course

**M.Sc Tutor** May 2025

The Royal Botanic Garden Edinburgh

- Developed and delivered a 3-hour introductory statistics workshop to the biodiversity and taxonomy M.Sc cohort

## Relevant Skills

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### Applied Statistics and Machine Learning

- Fourteen different probability, statistics and machine learning courses at university
- Dissertation involved developing Bayesian hierarchical regression models for real-world data

### Data Analysis and Visualisation

- American Statistical Association DataFest 2024 winner - Best Visualisation

### Programming

- Almost a decade of programming experience in a range of languages, both high- and low-level, with a particular strength in Python and R

## Volunteering

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### Committee Member (Tools Officer) and Task Leader

May 2025 - Present

Lothians Conservation Volunteers

- Manage the charity's toolshed and inventory
- Lead conservation tasks of up to 12 volunteers, ensuring safety in possibly remote locations

### Conservation Volunteer

Lothians Conservation Volunteers

March 2024 - Present

Morgan Arboretum, McGill University

May 2024 - July 2024

- Weekly commitment to maintaining and improving biodiversity in both Scotland and Canada
- Work includes controlling invasive species, tree planting, bog maintenance, pond work and cutting fire breaks

### Volunteer Fundraiser

October 2021 - June 2022

Dig Deep, The University of Edinburgh

- Independently raised £2820 in total
- Organised a series of bake sales
- Completed various physical feats including: walking from Edinburgh to Glasgow in a day; finishing 10th in a 30 mile, 10 000 ft climb, mountain race and reaching the summit of Mount Kilimanjaro.

### Volunteer Computing Department Support

September 2019 - August 2021

Fallibroome High School

- Co-leader of Python coding club for children aged 12-13
- Teaching Assistant for GCSE Computer Science

### Volunteer Swimming Instructor

January 2017 - March 2020

Macclesfield Amateur Swimming Club

- Taught children aged 3-16 of all abilities and a range of neurodivergent conditions
- Held sole responsibility for two classes that ran weekly

## Certifications

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### Outdoor Emergency First Aid

Issued December 2023, Expires December 2026

British Ambulance of Ski Patrollers, Edinburgh University Mountaineering Club

- Various outdoors oriented first aid skills, including Cardiopulmonary Resuscitation (CPR)