Dominic Owens, PhD

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About me

I am a highly motivated bioinformatician with 10 years of experience extracting key insights from biological data and communicating findings to industry and academic stakeholders through compelling visuals. My background as a bench scientist combined with expertise in drug discovery, epigenetics, and disease mechanisms, enables me to derive insights and contextualise them within the broader biological context. With proficiency in machine learning and statistics, I deliver actionable insights that drive real-world impact.

Professional Experience

Senior Bioinformatician Aug. 2023-present
Amphista Therapeutics *Cambridge, UK*

- Responsible for analysing proteomics, transcriptomics, and genomics data for multiple drug discovery projects
- Communicating results to project teams clearly, accurately, and to required specification
- Developing high-throughput cloud-based reproducible pipelines for end-to-end omics data analysis
- Delivering user-friendly and intuitive web apps for project teams to explore and visualise their data

Postdoctoral Research Fellow Jan. 2021 - Jul. 2023
Structural Genomics Consortium, University of Toronto *Toronto, Canada*

- Lead author on a collaboration with Pfizer that delivered a novel small molecule inhibitor with potential applications in targeted protein degradation therapies, published in Nature Chem. Biol.
- Co-author identifying a novel alkyl amine-based FBXO22-recruiting degrader, published in Nature Chem. Biol.

Education

DPhil (PhD) Medical Sciences Oct. 2015 - Nov. 2020
University of Oxford *Oxford, UK*

- Led a project on regulation of a gene involved in human leukemias, published in Nature Comm. and ranked in the 93rd percentile for online accesses
- Initiated and led a project on CRISPR/Cas9 and DNA repair with 129 citations, ranked in the top 5% of all papers

MSc Computer Science with Artificial Intelligence Jul. 2024 - Jul. 2026 (expected)
Northumbria University *Part-time, distance learning*

- Modules so far include data modelling and analytics, secure web development, and object-oriented programming

Skills and Experience

Data analysis and visualisation

- Proficient in extracting insights using machine learning methods like regression, clustering, and decision trees
- 10 years experience designing and implementing cloud-based omics analysis pipelines for next-generation sequencing data including RNA-seq, ATAC-seq, Cut&Run, ChIP-seq, Capture-C, from fastq files
- 5 years experience analysing proteomics data from raw files including TMT and label-free global proteomics, IP-MS, chemoproteomics, activity-based protein-profiling, and proximity-dependent biotinylation (BioID)
- Advanced data visualisation skills to transform complex biological data into attractive and accessible plots

Programming skills

- Proficient in R, with daily use and package development; skilled in Bash scripting and command-line tools; regular Python usage; knowledge of HTML, CSS, PHP, and Java
- Database design and implementation with SQL and MongoDB
- Cloud-based pipeline development with Snakemake, conda, and Docker
- Committed to building reproducible software with Git, containerised environments, and cloud platforms like AWS and Azure

Leadership, project management, and teamwork

- Strong record of delivering analysis results aligned with project specifications for maximum impact
- Developed and maintained multiple international scientific collaborations involving top-tier scientists across academia and industry
- Initiated and personally led three research projects each lasting two to three years and delivered high-impact papers, demonstrating my high attention to detail and strong organisational skills

Experimental skills

- 10 years wet-lab experience personally performing omics experiments including proteomics, RNA-seq, ATAC-seq, CUT&RUN, ChIP-seq, Capture-C