JOHN DAVEY

A data scientist and software engineer with two decades of bioinformatics experience, delivering robust results efficiently to clients large and small.

EXPERIENCE

present | 2023

Principal Bioinformatician

Fios Genomics — Remote

- Built Target Triage and other data mining packages, gathering and synthesising public data automatically for analysis reports to help clients select drug targets faster.
- Maintained and contributed to core code base of R, SQL and Javascript with Docker / Git / CI/CD.
- Set up and ran technical skills discussion group for Operations team to share expertise and consider policy choices.

2023 | 2022

Bioinformatics Team Leader

Fios Genomics — Remote

- Managed multiple long-running data analysis projects with large corporate clients in flexible teams of two to six analysts, including oncology clinical trials, proteomics, metabolomics and DNA/RNA sequencing. Also line managed a team of three analysts.

2022 | 2021

Senior Bioinformatician

Fios Genomics — Remote

- Delivered analysis reports for many different clients, involving machine learning models (elastic net, random forest, other regression and classification techniques) and many bioinformatics tools, based on DNA and RNA sequencing (Illumina, PacBio, Oxford Nanopore), methylation and other data sources.

2021 | 2016

Bioinformatician

Bioscience Technology Facility, Department of Biology — University of York

- Collaborated with a majority of the 70+ labs in the department on many kinds of data analysis projects, such as:
  - Tapestry, a tool to visualise, edit and report on complete long read assemblies of small eukaryotic genomes (see end-to-end Oxford Nanopore assembly of Angomonas deanei).
  - Cluster analysis of RNA-sequencing time course data with scikit-learn to identify effectors of circadian rhythms in Arabidopsis thaliana (Román et al., PNAS, 2021).
- Taught courses in Python, gene expression and basic single cell analysis.
- Organised regular bioinformatics meetings and clinics to share expertise throughout the department.

CONTACT

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johnomics

LinkedIn profile

Scopus (over 7,000 citations, h-index 25)

Google Scholar

TECHNICAL SKILLS

Programming: R, Python, SQL, JavaScript.

Engineering: AWS, Nextflow, Docker, Git, CI/CD, Linux.

Bioinformatics: DNA and RNA sequencing analysis, methylation, metabolomics, genome assembly.

Data analysis: tidyverse, tidymodels, scikit-learn, plotly, D3.

*Made with the R package **pagedown** based on Nick Strayer's template.*

Last updated on 2025-03-23.

2016 | 2013

Herchel Smith Postdoctoral Fellow

Professor Chris Jiggins's lab, Department of Zoology, University of Cambridge

- One of a team of postdoctoral researchers executing an ERC advanced grant on the causes of speciation in *Heliconius* butterflies. Focussed on genome structure and chromosome inversions, which required developing new techniques for genome assembly (Davey et al., 2017, Davey et al., 2016).
- Led a team of twenty to design and present an exhibit on butterfly speciation for the Royal Society Summer Science Exhibition in 2014.

2012 | 2008

Postdoctoral Bioinformatician

Professor Mark Blaxter's lab, Institute of Evolutionary Biology, University of Edinburgh

- Developed techniques for RAD Sequencing (genotyping by sequencing), analysed RAD-Seq data sets from many different collaborators across the UK (for example, Baxter et al., 2011, Houston et al., 2012, Richards et al., 2013, Liu et al, 2013) and published several major reviews and assessments of the technique (Davey et al. 2011, Davey et al. 2013).
- Organised several UK RAD Sequencing meetings, hosting the inventors of the technique to publicise the method across the community.
- Wrote and taught courses on R programming.

2004 | 2002

Software Engineer

Worked as a tester and developer on a large C codebase with Oracle SQL database (ask for details).

EDUCATION

2008 | 2005

Ph.D., Neuroinformatics

University of Edinburgh

Thesis title: The Identification of Beta-Catenin and Other RNAs in Developing Thalamic Axons

2001

M. Sc. in Software Engineering

University of Durham

1997 | 2000

B. Sc. in Computer Science (1st class Honours)

University of Durham