Tom Jenkins PhD

Software Developer & Data Analyst

Contact

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tom-jenkins

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Skills

Web Applications 4+ yr

Data Analysis 10+ yr

Data Visualisation 10+ yr

Bioinformatics 8+ yr

Cloud Computing 8+ yr

GIS & Spatial Analysis 5+ yr

Programming

JavaScript 3+ yr

React 1+ yr

Vanilla CSS 3+ yr

Tailwind CSS 1+ yr

R 10+ yr

Python 1+ yr

Bash / Linux 8+ yr

Nextflow 2+ yr

Experience

Frontend Developer Freelance Consultant — 07/2025 – Present
TJ Data Visualisation, UK

Example Project: I am an agile developer for clients in climate science, with the goal of delivering interactive web applications to showcase data from the global State of Wildfires report. Both map and time series apps achieve an average user duration of 3 minutes and an engagement rate of 68%.

Postdoctoral Research Fellow in Bioinformatics and Data Analysis — 07/2023 – Present
University of Exeter, UK (Fixed Contract)

I am leading a cloud computing project to process and analyse variants from DNA sequencing data (>1 TB) using bioinformatics and statistical analysis. I also mentor junior colleagues in coding and build tools to enhance accessibility and reproducibility in R and data visualisation.

Frontend Developer — 07/2024 – 09/2024
University of East Anglia, UK (Consultancy Contract)

I built interactive web applications that allow users to explore ClimateUEA's National Contributions to Global Warming data. I worked with climate scientists to iteratively design, develop and improve apps, and IT professionals to set up continuous integration with Bitbucket and AWS Amplify.

Software Developer and Bioinformatician — 04/2022 – 06/2023
Animal and Plant Health Agency, UK

I was the frontend developer in our team of UX, UI and backend data engineers in which we built an internal application to visualise geographic and metadata information to assist case workers in their disease outbreak investigations. I also developed nextflow pipelines to automate the QC and analysis of next-generation sequencing data.

Senior Data Analyst — 02/2021 – 03/2022
Natural England, UK

My role was to analyse, visualise and gain insights from geospatial and ecological data for multiple projects, including building R Shiny apps and interactive maps. For example, I worked with citizen scientists, government scientists and conservation advisors to develop a prototype Shiny app which enables citizens to explore the ecological diversity in their local pond habitats.

Postdoctoral Research Associate in Bioinformatics and Data Analysis — 12/2018 – 01/2021
University of Exeter, UK (Fixed Contract)

I co-led the development of the first European lobster genome and I statistically assessed genes linked to growth which could be targets for lobster aquaculture.

Education

PhD Bioinformatics and Evolutionary Biology — 2014 - 2018
University of Exeter, UK

MRes Informatics and Genomics (Distinction) — 2013 - 2014
Imperial College London, UK

BSc Marine Biology (First Class Honours) — 2010 - 2013
Swansea University, UK

Tools

- VS Code / Positron
- Git / GitHub / Bitbucket
- RESTful API
- AWS EC2 / HPC / OpenStack
- Netlify / AWS Amplify
- ECharts.js / Leaflet.js / Shiny
- MS Office / Google Docs
- Slack / Teams

Awards

Above and Beyond Award

Provided essential technical support to ECRs and PGRs for IT skills, coding, genomic analysis, stats and programming.

Principal Investigator Research Grant £35K

Genomic diversity in a calcareous red seaweed.

Presentations

UK Maerl Forum Webinar Invited Talk

Maerl genome diversity: insights into resilience and conservation.

Delivered to a 150+ mixed audience of scientists, policy-makers, admin staff and conservationists.

Conference Talk

Bats respond to climate through phenotypic plasticity and genetic adaptations.

Delivered to 100+ academics at the annual Genome Science conference.

APHA Departmental Seminar

Whole genome sequencing: what, why and how is it used in outbreak investigations of bovine TB.

Delivered to 20+ project managers, HR staff and legislation officers.

Projects

See my GitHub profile for a comprehensive list of open source projects.

Real-Time Earthquake Dashboard

Interactive dashboard I designed and developed to visualise real-time earthquakes using data fetched from the Cesium ion and US Geological Survey APIs.

LobsterGeneX React App

React and Tailwind CSS styled web application that I designed and developed to accompany our research article. This app allows users to visualise gene expression data for European lobsters.

Assembly Stats Viewer App

A web tool I developed that allows scientists to search, view and compare genome assemblies of any animal, plant or microbe. It works by building a query based on user input and which fetches data from the NCBI Datasets v2 REST API to display data on the app.

mapmixture

CRAN R package for spatial visualisation of ancestry, admixture and population structure. I am the creator and maintainer of this package.

Management

Project

I have experience of managing a project from conception to delivery, working with a team of people from diverse backgrounds and interests.

For this project, I led the writing of the proposal and was awarded the funding. I then coordinated the collection of samples and delegated laboratory work to colleagues. I analysed the data and led the writing of the scientific article which is available to view on Research Square. This project involved establishing connections and working with academics, government advisors, regional conservation trusts and local dive schools.

Mentoring

I have acted as a mentor and technical support for postgraduate students up to senior staff in bioinformatics, programming and data analysis.

I have also conducted several workshops and written online tutorials to help the wider community.

Publications and Media

Publications

To date, I have authored 20 peer-reviewed scientific articles and my work has achieved nearly 1,000 citations from other scientists.

A full list of my publications is available on my Google Scholar profile.

Media Press Releases and Interviews

Several of my research articles have attracted national media attention.

For example, I used predictive modelling to assess present-day and future habitat suitability in a UK nationally rare soft coral species. This work was picked up by 127 news outlets, including the BBC Devon, Sky News and The Guardian, and I was interviewed live on BBC Radio Wales Drive.