

# Tim Richardson

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## TECHNICAL SKILLS

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**Languages & Tools:** node.js, django, elasticsearch, postgresql, docker, bioinformatics, reactjs, javascript, d3.js, python, scipy, numpy, git, amazon-web-services, kubernetes, graphql, google-cloud-platform, samtools, continuous-integration, continuous-deployment, tdd, microservices, unit-testing, web-services.

(Dislikes: php, perl)

## EXPERIENCE

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### Genomics England

Senior Software Engineer and Performance Development Lead

London, UK  
Dec 2021 – Present

- **Engineering Leadership:** Line Manager for 6 direct reports, responsible for mentorship, performance management, and delivery oversight.
- **Workflow Modernisation:** Key role in migrating complex workflow orchestration systems to Nextflow, improving scalability and reproducibility.
- **AI Transformation:** Leading internal initiative to introduce and operationalize AI coding assistants across engineering, driving efficiency.
- **Backend Development:** Architecting and maintaining robust backend services using Python and AWS for high-throughput genomic data processing.

### IQVIA

Senior Software Engineer - AI/ML Team

London, UK  
Mar 2019 – Dec 2021

Stack: go, fastapi, typescript, reactjs, redux, elasticsearch, postgresql, d3.js

- **Full-Stack Development:** Built data analytics product for real-world healthcare data, developing backend services in Go and frontend in React.
- **AI Model Deployment:** Deployed machine learning models using FastAPI, enabling scalable inference for healthcare analytics.
- **Statistical Features:** Developed and implemented statistical features for the analytics product, enhancing data insights capabilities.
- Coordinating releases, product development, process improvement, code review.

### Project Shivom

Lead Developer

London, UK  
Oct 2018 – Mar 2019

Stack: blockchain, smartcontracts, google-genomics, google-cloud-build, postgresql, graphql, react-apollo

- Design, development, and deployment of a genomic data sharing solution with blockchain components.
- Managed development team, created wireframes, developed backend services (REST APIs) and React SPA frontend.
- Deployed using Docker and App Engine.

### Polecat

Python Contractor

London, UK  
Jul 2018 – Oct 2018

Stack: django, django-rest-framework, graphene-python, reactjs, elasticsearch, postgresql, plotly

- Built a Python reporting service to generate PowerPoint marketing reports.
- Engaged with technical teams and product managers to produce software specifications and wireframes.
- Solution built using Python, Django, GraphQL, React, Elasticsearch, and Plotly.js.

### Congenica

Senior Frontend Developer (React)

Hinxton, UK  
Mar 2016 – Jul 2018

Stack: perl, reactjs, react-router, redux, reactive-programming, bioperl

- Developed new and optimised existing features for clinical genomics tool using Perl APIs and React frontend.
- Focused on optimal data flow for data-intensive UI.
- Led development of an API to integrate Congenica's Sapientia platform with Genomics England's 100k genomes project.

### **Repositive Ltd**

London, UK

*Lead Developer*

Nov 2014 – Mar 2016

*Stack: docker, node.js, ansible, ember.js, git, agile, postgresql, elasticsearch*

- Led development of a genomic data discovery platform, including infrastructure and development processes.
- Developed web app architecture based on Node.js Express API using Redis, Postgres, and Elasticsearch.
- Built UI as an Ember.js single-page application.

### **Wolfson Institute for Biomedical Research**

London, UK

*Freelance Bioinformatics Project*

Oct 2014 – Nov 2014

- Analyzed ChIP-SEQ project: trimming and QC, peak calling, motif discovery, GO annotation.

### **Fire Tech Camp**

London, UK

*Instructor*

Jun 2014 – Aug 2014

- Taught Python programming to children aged 11-15.

### **Ixxxy**

Brighton/Remote

*Django Developer*

Mar 2013 – May 2014

- Built and maintained sites based on Django/Python CMS system.

### **Ecomarket.com**

London, UK

*Django Developer*

Jan 2013 – Mar 2013

- Backend developer for an online marketplace using Django, Python, and PostgreSQL.

### **Swerve Concepts**

London, UK

*Junior Software Developer*

Feb 2011 – Jan 2013

- Full stack developer using Python and PHP frameworks. Developed cloud-based products Swerve Media Hub and SignUpAnywhere.

## **EDUCATION**

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### **Birkbeck, University of London**

London, UK

*MSc Bioinformatics & Systems Biology (Merit)*

Sep 2012 – Sep 2014

- Studied statistics, protein structure, sequence alignment, systems biology, and software development.
- Thesis: Tracing human migration using MCMC methods for population clustering with dense genotype data.

### **Leeds University**

Leeds, UK

*BSc Cognitive Science (Hons)*

Sep 2005 – Sep 2008

- Interdisciplinary course covering computing, psychology, and philosophy.
- Dissertation: Data mining techniques for dynamic data sets.

## **PROJECTS & INTERESTS**

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**hansard** ([github.com/timini/hansard](https://github.com/timini/hansard))

Analysis of the hansard archive materials. Uses Jupyter, Django REST, Ember.js, Docker, Kubernetes.

**chromo9** ([github.com/timini/chromo9](https://github.com/timini/chromo9))  
Biocomputing II project using Perl.  
**keyzen** ([github.com/timini/keyzen](https://github.com/timini/keyzen))  
A touch typing trainer geared towards programmers.