

# Dr Joe Gallagher

Email: [joedgallagher@gmail.com](mailto:joedgallagher@gmail.com)

Telephone: 0771 610 0583

Website / Interactive CV: <https://jogall.github.io>

## PERSONAL PROFILE

Data analyst transitioning into the field of data science after attaining a Ph.D. in evolutionary biology. Expertise in data analysis, warehousing, visualisation and presentation (7 years experience R; 7 years MS Excel; 2 years SQL and C++). Interested in applying predictive analytics and machine learning methods to a role in business intelligence or quantitative finance. Currently gaining industry experience through two internships; one at a business intelligence and data warehousing consultancy and one at a technology-centred educational consultancy.

## RECENT EMPLOYMENT

### June 2017 - current

#### Internship at VLDB Solutions

- Automated processing of financial data, adding to **postgreSQL** database, and calculation of performance measures
- **Parallelisation** of data and queries using the MPP database server **Pivotal Greenplum**
- Used a DBI-compliant interface to perform advanced statistics using R and quantitative finance package quantmod (e.g. MACD, RSI, percentile rank)
- **Unix shell scripting** allowed automation of process with VisualCron task scheduling software via virtual machine
- Performed database administration using **pgAdmin III**

### June 2017 - current

#### Internship at hi-impact Consultancy

- Basic server administration and network management
- Media development, web design, and graphic design
- Volunteered at The Big Bang Fair North West at The Exhibition Centre Liverpool, an event to showcase STEM careers to schoolchildren; helped run a stall featuring a range of interactive science, technology and engineering activities

### Sept 2011 - July 2016

#### Ph.D. researcher at University of Sheffield

- Designed and conducted a 4.5 year research project to formulate and answer a novel question in the field of insect immunology
- Gained new technical skills through a combination of independent learning, collaboration, and attending training courses, conferences, and workshops
- Honed communication skills by working alongside peers, regularly presenting and discussing results, and teaching and supervisory roles

## EDUCATION

- Sept 2011 - July 2016    **Doctor of Philosophy**, University of Sheffield  
Thesis: "Gregarious immunisation in the mealworm beetle, *Tenebrio molitor*"
- Sept 2007 - June 2011    **MBiolSci Zoology**, University of Sheffield  
First Class (Hons.)

## OTHER SKILLS

### Technical

- **R: statistical analysis** (regression, general linear models, mixed modeling, principal component analysis, etc.); **quantitative financial modelling; machine learning** (classification, resampling, random forest, etc.), analysing spatiotemporal data and **forecasting** time series data; web scraping and text mining
- **Graphical visualisation** and **interactive dashboards** / web applications (R Shiny, plot.ly, Tableau)
- **postgreSQL, MySQL**: database creation, complex queries, administration (**pgAdmin, phpMyAdmin**); **data warehousing** and query parallelisation (**Pivotal Greenplum**)
- **Microsoft Excel**: pivot tables, VLOOKUP, macros
- **C++**: automated **image analysis** of microscopy images; developed a **motion tracking** application to track insect locomotion
- **Web development**: HTML5, CSS, JavaScript, Jekyll
- **Shell scripting**; using and maintaining **Linux** OS

### Communication, leadership and teamwork skills

- **Scientific writing**: published in and reviewed for peer-reviewed scientific journals
- **Oral** and **poster presentations** at scientific conferences
- **Blog** about football statistics using interactive R tutorials
- **Teaching: supervised** several undergraduate and Masters research projects; **demonstrated** on undergraduate laboratory practicals (2011 – 2015) and an overseas field course (2012); provided **technical training** on laboratory techniques and data analysis to visiting researchers
- Active contributor to **public outreach programme** 'Discovery' at University of Sheffield, a series of interactive workshops and talks aimed at promoting STEM involvement to schoolchildren (2012-2016)

## REFERENCES

(Contact details available on request)

Paul Johnson  
Managing Director  
VLDB Solutions

Professor Mike Siva-Jothy  
Professor of Entomology  
& Head of Department  
University of Sheffield

Dr Sophie Evison  
Post-Doctoral Research Fellow  
University of Sheffield