# Dr Joe Gallagher

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## PERSONAL PROFILE

Data-driven evolutionary biology Ph.D. graduate looking to transition into a career in data science. Expertise in data mining, statistical analysis, data visualisation, and data warehousing (7 years experience R; 7 years MS Excel; 2 years SQL and C++). A keen interest in predictive analytics and machine learning would be nourished by 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**

- Implemented an automated process to scrape investment trust prices and add to a **postgreSQL** database
- Calculated performance measures using **sql scripts** to advise client portfolios
- **Data warehousing** using the massively parallel processing (MPP) database server **Pivotal Greenplum**
- **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**

- Technical support, server administration, network management
- Media development, web design, graphic design, video production, 3D virtual tour development using Wanda
- 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**      **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..); **machine learning** (classification, resampling, random forest, etc..), analysing spatiotemporal data and **forecasting** time series data; **quantitative financial modelling**; 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 (**Pivotal Greenplum**)
- **Microsoft Excel**: pivot tables, VLOOKUP, macros
- **C++:** automated **image analysis** in immunology assays; developed a **motion tracking** application to track insect locomotion
- **Web development**: HTML5, CSS, JavaScript, Jekyll
- Shell scripting; using and maintaining Unix OS
- Version control and online repository hosting using **GitHub**

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 reseachers
- 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 | Professor Mike Siva-Jothy | Dr Sophie Evison |
|---|---|---|
| Managing Director | Professor of Entomology | Post-Doctoral Research Fellow |
| VLDB Solutions | & Head of Department | University of Sheffield |
| | University of Sheffield | |