Dr Joe Gallagher

Email: joedgallagher@gmail.com
Telephone: +44 (0) 771 610 0583
Website: https://jogall.github.io

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

- Streamlined a process to scrape investment trust stock prices and add to a large database where performance measures are calculated to advise client portfolios
- Creation and administration of **postgreSQL** databases using **pgAdmin III**
- **Data warehousing** using the massively parallel processing (MPP) database server **Pivotal Greenplum**
- Integration of R analysis using the quantitative finance package '**quantmod**'
- Used **Unix shell scripts** to allow automation of process with VisualCron task scheduling software via virtual machine

June 2017 - current   Internship at hi-impact Consultancy

- 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
- Media development, web design, graphic design, video production, 3D virtual tour development using Wanda
- Technical support, server administration, network management

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; web scraping and text mining
- **Graphical visualisation** (ggplot) and creation of **interactive dashboards** and 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

References are available on request.