

Dr Mark Laing | Software Engineer
Manchester, UK

07472499511
m.p.laing@outlook.com

Personal Profile

In academia I discovered a talent for and found enjoyment in automating data capture and analysis; I have since pursued a career in the technology sector. I am a polyglot programmer and can contribute to the full stack, including web apps, CI pipelines, managing deployments, and more. I am looking for a fully remote position as a Senior Software Engineer. I am an amiable person who thrives on technical problems and delivers pragmatic solutions.

Experience

Medicines Discovery Catapult

Software Engineer (10/2019 - current)

- Worked with stakeholders in the data science team to develop a set of requirements for a custom data pipeline for patents in their raw text format. I then delivered a set of tools to download, index, and extract US and EPO patents (dating back to 1976), and ingest the data into our data lake. (*Golang, MongoDB, Kubernetes, gRPC*).
- Created a queue ingestion tool and web UI for our data lake. (*Angular, Typescript, Golang, RabbitMQ, Kubernetes, HTTP, gRPC, gRPC-web*).
- Created custom CI tooling to automate and simplify the release process for non-technical users in order to enforce semantic versioning. (*Docker, Gitlab CI, Bash, Git*).
- Designed an application which could capture and share data inputted in the browser. This included two backend APIs, a browser plugin, and a desktop app. For the desktop app, I provided a template application for the other developers, which bundled electron and the static C bindings for git. (*Golang, Angular, Redis, MySQL, Git, Kubernetes*).
- Contributed to many microservices in our data lake and their internal libraries. (*Golang, Scala, Python*).
- Mentored and taught other team members about CI/CD, Kubernetes, Golang, and programming concepts.
- Promoted good engineering practice across the wider department by holding demonstrations and Q&A sessions.

The Hut Group

*Graduate Software Engineer
(03/2018 - 10/2019)*

- Contributed to *Ansible* playbooks for the deployment, maintenance, and configuration of multiple applications, including *Elasticsearch* and *Prometheus*.
- Contributed to multiple proof of concept projects including an influencer platform (*Golang, React*), and a cloud offering (*Golang, gRPC, Kubernetes, Istio, Terraform, Openstack*).
- Implemented a new version of a dashboard that was used internally by traders for

real-time sales data. I improved the user experience and the new version was adopted. (*Python, Javascript*).

Education

Doctor of Philosophy

Newcastle University (09/2014 - 02/2020)

- Designed and implemented psychophysical and fMRI (functional magnetic resonance imaging) experiments. This involved writing *Matlab* code to create and display stimuli programmatically according to strict experimental protocols, and to capture subject responses with high temporal fidelity.
- Created pipelines for the analysis of experimental data. fMRI data is multidimensional and its analysis and interpretation requires a good grounding in mathematics and statistics. (*Matlab, Python*).

Master of Research - Neuroscience

Newcastle University (09/2013 - 09/2014)

Master of Mathematics

Newcastle University (09/2008 - 07/2012)

- Implemented a numerical model of geomagnetic field reversals in *Fortran 95*.

Publications

Laing, M., Rees, A., Vuong, Q. (2015). *Amplitude modulated stimuli reveal auditory-visual interactions in brain activity and brain connectivity*. *Frontiers in Psychology* 6:1440.

Vuong, C., Laing, M., Prabhu, A., Tung, H.I., Rees, A. (2019). *Modulated stimuli demonstrate asymmetric interactions between hearing and vision* 9:7605

References are available on request.