

BACKGROUND

I am a Data Scientist, Mathematics Ph.D. and python developer.

I created my last role after being brought in as a one-man data/dev team with the brief: ‘use data to improve processes’. I developed Blink SEO’s internal software from scratch; written in python and running in GCP Compute Engine, connected to Big Query and various data sources via API to ingest and process client data then produce visualisations and make actionable recommendations. I also wrote a CLI and a prototype frontend in Retool which is still in use.

The software has now been released as a SaaS product: [Macaroni Software](#), boasting a [20× increase in SEO productivity](#). The team has grown and I am working in an agile environment to improve the product.

My Ph.D. gave me the opportunity to present at several international conferences and publish in [respected journals](#). I also have two years lecturing experience so I am used to communicating difficult concepts to a variety of audiences.

SKILLS

Data science

- Regular use of ScikitLearn, Pandas, NLTK, other python libraries.
- [CodeCademy](#) pro *Data Scientist* course including ScikitLearn, TensorFlow, NLP.
- [Doctoral thesis](#) develops spectral analysis methods for detecting correlations in multi-dimensional time series and builds stochastic models to test hypotheses.

Programming

- Daily use of Python, SQL, Bash, GitHub, JavaScript.
- Data engineering and software development focussed on GCP products.
- Ph.D. and Masters projects used Matlab and C++.

RECENT WORK EXPERIENCE

Data scientist — [Blink SEO / Macaroni Software](#)

2021 - 2024

- Full stack development of Macaroni Software.
- Macaroni allows the SEO team to deliver a whole year’s work in [a single month!](#)
- I have created this role by listening carefully to the team to address their specific requirements in ways they may not have considered.
- Successfully weaned the whole team away from their spreadsheets, replacing that mess with Macaroni.
- Software written in python, accessing data via APIs, processing in python and SQL, connection to Big Query, various ML and NLP methods used.

Data science researcher — [National Physical Laboratory \(NPL\)](#)

2015 - 2021

- Doctoral research in industrial collaboration with Dr. Valerie Livina.
- Presenting data and results for articles, posters and stake-holders.

Associate lecturer — [Sheffield Hallam University](#)

2017 - 2019

- Taught a variety of maths and computing courses from Foundation to Masters.

ACADEMIC BACKGROUND

University of Reading: Ph.D. Mathematics

Feb. 2021

- Thesis title: *Tipping Points and Early Warning Signals*.
- Publication of three papers^{1,2,3} in respected journals.
- Participation in several international conferences and workshops.

Imperial College London: M.Res. Mathematics (Distinction)

Sept. 2015

- Dissertation title: *Adaptive Mesh Generation*.

University of Edinburgh: MA Mathematics (First class Hons.)

July 2013

- Dissertation title: *Paths through connected digraphs*.