## Thomas Dickson

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**OBJECTIVE**

I am a software developer in full time employment who is looking to work as part of a team exploring, modelling and communicating uncertainty in numerical models to solve practical problems. I enjoy learning concepts and tools in order to write code to solve problems. Please see my github page for my research and see this video to watch me present initial research at a conference.

**EXPERIENCE**

*English Institute of Sport Senior Research Assistant* December 2019 - Present
Performance Sport Engineering Laboratory, University of Southampton

- Implemented novel data driven modelling tools and analysis in Python. This has included developing and deploying Python packages using Docker, git, gitlab-pipelines and Pytest.
- Developed and deployed an online dashboard in Python using scipy, pandas, Heroku, Docker and git.
- Data analysis of novel experiments using Python, pandas.

*Naval architect* September 2013 - August 2014, Summer 2015
DSTL, Portsmouth, UK

- Developed analysis tools in Excel VBA to cost complex engineering projects.
- Communicated technical analysis to diverse stakeholders.

**EDUCATION**

*PhD,* Uncertainty in Marine Weather Routing; An application into Polynesian Seafaring
University of Southampton, Southampton, UK, 2016-2020 (Expected)

- Developed novel complex numerical models to investigate engineering problems in Python and Julia.
- Developed code to run in parallel on cloud computing resources.
- Analysed data using Bayesian statistics and machine learning.
- Communication of research via conference presentations and journal papers.

*MEng,* Ship Science
University of Southampton, Southampton, UK, 2011-2016

- Experimental analysis using Python and Pandas.
- Achieved 1sts in my 3rd and 4th year research projects.

**TECHNICAL SKILLS**

*Languages & Software:* Python (numpy, matplotlib, pandas, plotly, scikit-learn, sphinx), Julia, Docker, Heroku, AWS (EC2), Matlab, Latex, Common Lisp, Excel VBA, MySQL, CI/CD pipelines, test development, version control (git), Jekll, Hugo, vim
*Operating Systems:* Linux, Windows, Unix
*Numerical Analysis:* Optimization, Machine Learning, Linear Algebra, Calculus, Monte Carlo Methods, Iterative Methods, Parallel Programming, Data Structures, Uncertainty analysis, Sensitivity analysis

**References on request**