# Ashley Wright

Research Fellow

0467 010 058
Ashjwright88@gmail.com
www.ashleyjwright.com
Linkedin.com/in/ashjwright/

## PROFILE

I am an accomplished and highly organised Research Fellow with a PhD in flood forecasting and over 7 years of experience in delivering insights based on statistical modelling and algorithms. I have published 4 articles in top tier journals that have been cited a total of 18 times, 3 as lead author; contributed to an upcoming book chapter on the Intersection of data science and sustainability; delivered and/or contributed to more than 10 research reports, 3 refereed conference articles and 20 conference presentations; co-organised one conference session; supervised more than 5 honours students; lead and managed 3 research assistants; organised and ran more than 5 workshop sessions. I am eager to develop myself as an emerging leader in Data Science and Forecasting.

## SKILLS

Numerical analysis, Quantitative and qualitative forecasting, Statistics, Data analysis, Python, MATLAB, R. SQL, Machine Learning, Model development and testing, Communication, Clear and effective presentation of complex problems, Stakeholder engagement.

## EXPERIENCE

**Monash University**

Sep 2018 > Current

**Research Fellow – Flood Forecasting**

Summary:

Floods are among the most damaging natural disasters in Australia. Over the last 40 years, the average annual cost of floods has been estimated to be $ 377 million per year. Our research team is tackling the problem of incorporating remotely sensed data into flood forecasting models. The research is used to improve flood forecasting capability in Australia.

Highlights:

- Comparing the capability of data driven models with process-based models to forecast floods. I am using the Long Short-Term Memory (LSTM) recurrent neural network (RNN).
- Run Markov Chain Monte Carlo (MCMC) and data assimilation experiments on the MASSIVE high performance computing (HPC) cluster.
- Regularly engage with end-users and stakeholders to ensure research tasks are aligned with strategic priorities.
- Presented research on methodologies to optimise rainfall estimation techniques used in flood forecasts in USA.
- Collaborate with external agencies to incorporate models into a national water forecasting platform.
- Deliver flood forecasting model development guidelines to end-users.

## EXPERIENCE (...)

**Monash University**
Mar 2014 > Current

**Teaching Associate**

Highlights:

- Develop and deliver lectures, supervise honours students lead and manage team meetings, guide tutors to respond to academic inquiries, and coordinate assignments and marking responsibilities.

**Monash University**
Sep 2017 > Jan 2019

**Research Fellow – Flood mitigation strategy**

Summary:

Water management can impact business activity as well as social and ecological health. Our research team delivered roadmaps to aid the Indonesian city of Bogor in their transition to a water sensitive city.

Highlights:

- Organised workshop sessions and developed an application to assess stakeholder receptivity towards different flood mitigation options.
- Lead and managed 3 research assistants.
- Presented on stakeholder receptivity to flood mitigation options in Italy.

**Metropolitan Fire Brigade**
Feb 2016 > May 2016

**Research Scientist**

- Deliver a literature and operational based report that contributed to the enhancement of the Metropolitan Fire Brigade's Health, Safety, and Environmental policies, standards, and goals.

**Breese Pitt Dixon**
Jan 2012 > Mar 2014

**Civil Engineer**

- Liaised with internal and external stakeholders to deliver urban development solutions using current standards.
- Served as an Occupational Health and Safety committee member to help develop standards, rules and procedures.

## EDUCATION

**Monash University**
Mar 2014 > Sep 2017

**Doctor of Philosophy**

- Thesis title: Estimating areal rainfall time series using input data reduction, model inversion, and data assimilation.
- Key research areas: Flood forecast model development, parameter estimation, data assimilation, uncertainty analysis.
- Awards: Eric Laurenson medal for writing an excellent thesis and communication of research findings.

**Monash University**
Feb 2007 > Nov 2012

**Bachelor of Engineering and Bachelor of Science**

Graduated with First Class Honours from the Faculty of Engineering.
Majors: Civil Engineering, Applied Mathematics and Physics.