




Dr. Will Faithfull

Machine Learning Engineer
and Experienced Software
Project Lead

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Education

PhD – Unsupervised Change
Detection in Multivariate Streaming
Data | Bangor University | 2018 |
Supervisor: Prof. Ludmila I. Kuncheva

BSc (Hons.) Computer Science |
Bangor University | 2011 | First Class

Skills

Software Engineering: Java, Spring,
Maven, JUnit, JavaFX, Jackson, JPA,
Hibernate, SQL, C#, Typescript
ML / Data Science : Matlab, Python,
Jupyter Notebooks, Keras
(Tensorflow), Pandas, Scikit-learn,
OpenCV Java Bindings
Databases : PostgreSQL, Firebase
DevOps : Gitlab, Git, Docker,
Kubernetes
Operating Systems: Windows, Ubuntu
Cloud: GCP, Azure, AWS

Other

Organiser @ Code for Lancaster
- Coordinate community software
projects
- Organise meetups and talks

One World Hackathon (Charity event)
- Leading role in the team that
designed and built a pledge site for
the One World Strong Foundation
- www.oneworldmarathon.org

Blink Detection
- Final chapter of PhD was a fully
fledged eye-blink detection system
from streaming video.


FishEye
- Computer vision project which used
object detection to count fish in
underwater video footage.

Meander
- Library for statistical change
detection.

Experience

2018	Machine Learning Engineer (Contract) Building LSTM RNN models in Python / Keras / Tensorflow for time series prediction.	Miralis Data, Lancaster
2017	Senior Back-end Developer (Contract) Developed a biometric aggregation platform in Java / Spring for a subject emotional arousal tracking and intervention system using ANT+ heart rate monitors and Android devices.	Bangor University / Psychology Dept
2015	Lead Java Developer Lead an all-remote team of 4 developers working in Java / Typescript. Responsible for product development, software design, deployment and implementation. Project is mostly RESTful Spring Boot services deployed on GCP / GKE (Kubernetes). OAuth2 authentication. Client apps for Android and iOS.	Infinity Business Advancement Systems, Cardiff
2014	Senior Back-end Developer (Contract) Study into the feasibility of digitising front-line nursing data collection and dissemination. The project explored the difficulties of the existing paper based solution and proposed technological solutions. The outcome was a proof-of-concept system written in ASP.NET.	BCUHB / Feasibility Study
2013	Back-End Developer & Managing Director Consultancy, contracting and IP development. Numerous short term consultancy and contract customers. Specialise in back end development, especially REST microservices and Spring libraries.	Sourcepulp, Bangor
2013	Lab Robotics Developer (Contract) Developed standards-compliant embedded software for lab robotics in C# (.NET 3.5). Software is shipped on the RoboBlot system.	Bee Robotics, Caernarfon
2011	Senior Demonstrator Prepare and deliver courses to undergraduate students. C#, L ^A T _E X, Linux System Administration, Pattern Recognition and Neural Networks, Java Programming 1, 2 and 3.	Bangor University, Bangor
2011-2018	<u>PhD in Computer Science (Part time)</u>	Bangor University, Bangor
2008-2011	<u>Undergraduate in Computer Science</u>	Bangor University, Bangor

Published Journal Papers

Find more publications on Google Scholar:  [goo.gl/7cXopN](https://scholar.google.com/citations?user=goo.gl/7cXopN)

2019	Combining Univariate Approaches for Ensemble Change Detection in Multivariate Data Information Fusion	W. Faithfull, J. Rodriguez and L. Kuncheva
2013	PCA feature extraction for change detection in multidimensional unlabeled data IEEE transactions on neural networks and learning systems	L. Kuncheva and W. Faithfull

Awards

2014	Bangor University Impact & Innovation Award Sourcepulp - WardHub Smart Ward System	
2014	Bangor University Entrepreneurial Award Sourcepulp - WardHub Smart Ward System	
2012	IEEE VAST Challenge Honourable Mention SitaVis - Interactive situation awareness visualization of large datasets	
2011	British Computer Society Prize Top of cohort in Computer Science	