DANIEL GALEA

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Profile

A 2nd year Computer Science PhD student studying applications of deep learning to meteorology. Also a Masters graduate in Atmospheric Science with a background in computer science and computational physics. Experienced in implementing models from scientific papers in a variety of programming languages.

Education

10/18 - Present **University of Reading**
PhD Computer Science
Title: Deep Learning Atmospheric Features

- Working with Tensorflow / Keras in Python 2.7/3.6 with Convolutional Neural Networks on both CPUs and GPUs
- Developed skills in Linux management and Git

09/17 – 08/18 **University of Reading**
MSc Atmosphere, Ocean and Climate
Dissertation Title: Investigating urban canopy parametrizations for high-resolution NWP and air quality modelling

- Learnt major physical processes controlling meteorological activity across the globe
- Developed skills related to modelling certain weather phenomena. These include implementing a model from a scientific paper, debugging of code and testing of results.
- Developed data analysis techniques while carrying out my dissertation.
- Computational modelling of physical systems using Python, including numpy.
- Ability to handle, analyse and interpret complex data, before presenting it back based on the overall analysis made.
- Advanced problem solving and numeracy skills.
- Accomplished communication skills, both written and verbal, developed through numerous essays, scientific reports and presentations.
- Proficiency in all areas of Microsoft Office, including Excel, Word and Powerpoint.

Notable Modules – Numerical Modelling of the Atmospheres and Oceans; Atmospheric Physics

09/14 – 06/17 **University of Malta**
BSc (Hons) Computational Physics

- Developed various modelling techniques using various programming languages including C, Matlab and Octave
- Experienced various computer science fundamentals including LINUX scripting, High-Performance Programming in C, Object-Oriented

Programming, Memory Control and some techniques in Artificial Intelligence, e.g. Genetic Algorithms
- A diverse understanding of physics, from Optics to Quantum Mechanics.
- A considerable improvement in mathematical skills including solving of differential equations, geometry, probability and vector analysis.
- A very good introduction to and honing of computational skills including programming principles, data structures and algorithms, machine learning and High-Performance Computing.
- Developed an analytical and methodological approach to science.
- Developing software in C, C++, Java, Matlab, Octave.

Notable Modules – Computational Physics Practicals; Probability, Sampling and Estimation; Data Structures and Algorithms; Concurrency, HPC and Distributed Computing; Introduction to Science of the Atmosphere

07/12 – 10/12 **ECDL Advanced Certification**
- Covered modules are Microsoft Word, Excel, Access and PowerPoint

Work Experience

06/16 – 09/17 **Java Software Engineer**
Loqus Business Intelligence, Malta
- Achieved several improvements to existing algorithms that were then used in client software.
- Helped in transitioning company from using MySQL on company servers to MongoDB on AWS services.
- Developed data analysis techniques to identify where algorithms could be improved and then to test them after fixes were implemented.
- Learning to work within and support a team.
- Presenting results to executives.

Additional Skills

Having been a Scout for around 15 years, the last five of which have been as a Scout Leader, I have developed certain interpersonal skills that help me deal with most situations, for example, planning for and dealing with the unexpected and maintaining a safe environment for Scouts, and being patient with people. I also am a certified First Aider.

Activities and Interests

I have a keen interest in sports. I was an avid boxer, having had an amateur bout a couple of years ago, and an avid cricketer, and enjoy watching most other sports, especially football and golf.