

Dr Bernard James Mason

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Profile

I am a junior software developer with a scientific background in atmospheric processes. I have a strong work ethic and am keen to expand my skills and knowledge. I started programming during my PhD, in 2006, and continued building software for data analysis and custom instrument operation during my time as a scientific researcher. I started full time software development in September of 2016 working at Gnupp Ltd where I have been constantly challenged to improve my general programming and development knowledge. I am self reliant and can take the initiative but would prefer to work in a cohesive team environment.

Skills and Expertise

Programs and frameworks I am familiar with include, but are not limited to :

- **.Net** : Visual Studio, Resharper, ASP.NET MVC 5, Entity Framework, Ninject, AutoMapper, Nuget, Umbraco, MySql.Data, WinForms
- **Sql** : MySql, MSSQL - tables, views, stored procedures
- **Source Control** : Git
- **Linux** : Antergos, GNOME, bash
- **Additional** : HTML, Javascript, LabVIEW, Igor, Python, Matlab, Scilab

Personal and Hobbies

In my spare time I am an avid cook and foodie. I enjoy running frequently and take part in competitive races. I also have a keen interest in strategic board and card games, in particular, Magic the Gathering.

Work and Education

Software Developer at GNUPP Ltd (08/2016 - present)

Oxford, UK

Overview: Whilst working at Gnupp I have gained a good working knowledge base of the .NET framework and the tools used to develop websites, APIs, databases and Windows applications. Since starting I have built a blog website from the ground up, (in MVC 5), built a basic HTTP web server from raw socket

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connections and solved multiple other smaller coding challenges I have been set. The current project (since May 2017) is building a Magic the Gathering deck building application using the .NET framework. I have built data gathering software, designed the database (MySQL) and wrote an interfacing data layer, written in C#. I have prototyped this against a WinForms application, and am currently in the process of building application services and an API to be called by any desired party.

Postdoctoral Researcher at National Oceanic and Atmospheric Association (08/2014 – 08/2016)

Chemical Sciences Division, Boulder, Colorado

Overview: Analysis of historic flight data to assess the instrument performance against other commonly used aerosol absorption measurements. Combined assessment of multi-instrument accuracy and precision. Development an operation of a combined cavity ring-down/photo-acoustic spectrometers for extinction and absorption measurements of ambient aerosol optical properties. Characterizing instrument performance in the laboratory and under ground level deployment conditions.

Ph.D. in Aerosol Optical Properties (01/2011 – 06/2014)

University of Bristol, Aerosol Dynamics Group, Professor Jonathan Reid Laboratory

Overview: Cavity ring down spectroscopy for determining light-scattering properties of single particles and aerosol ensembles. Assessing fundamental optical properties of common atmospheric analogues for use in atmospheric radiative forcing models.

M.Sci. in Chemistry (09/2007 – 07/2010)

University of Bristol, Bristol, United Kingdom

Overview: Final year research project: synthesized heterogeneous palladium and platinum catalyst analogues for synthesis of methyl methacrylate, a monomer used in the creation of the plastic, polymethyl methacrylate.

Publications: A list of scientific publications is available on request.