

Brijesh Patel

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PROFILE

I graduated with a 1st in Physics from the University of Manchester, and have gained experience in web development as well as data science and engineering. I have honed problem-solving skills in analysis and programming, gaining transferable skills in communication, teamwork, leadership, and independent research. My MPhys project focused on analysing MRI data of cervical cancer tumours, and I have completed data-based and web development projects at BAE Systems, including the COVID-19 Test and Trace program for the Department of Health and Social Care (UK government).

Please take a look at my website to see my portfolio: <https://brijeshpatel.co.uk/>

EDUCATION

University of Manchester (2015-2019)
(with 3rd year exchange at the University of Illinois at Urbana-Champaign)

Physics (MPhys):
1st (Hons)

Brighton Hove and Sussex Sixth Form College (BHASVIC) (2013-2015)

A Levels:
Maths: A*, Further Maths: A*, Physics: A*, Chemistry: A

St Andrew's CE High School (2009-2013)

GCSEs:
7A*s (including Maths and English), 5As, C (FSMQ)

WORK EXPERIENCE

BAE Systems Applied Intelligence (Chelmsford) – Developer and Data Scientist/Engineer (Sep 2019-Present)

- Worked in a team on a high-profile data engineering (ETL) based project for the COVID19 Test and Trace programme with the DHSC (UK government) on many databases used by hundreds of users across government (using SQL/Scala/Databricks and MS Azure/git). Responsibilities also included fixing bugs and helping ingest new tables by liaising with other teams and suppliers, maintaining a live service, investigating user queries and issues such as pipeline failures or stale data, and also generating documentation whilst staying organised when multi-tasking in a high pressure environment
- Worked on internal projects involving HTML, CSS, JavaScript and React, as well as working closely with other engineers and dealing with merge conflicts
- Gained significant experience with Python too (including NumPy, Matplotlib, SciPy, pandas packages), Windows and Ubuntu Linux operating systems as well as git version control and agile
- Worked with machine learning-based techniques including convolutional neural networks (CNNs) for signal, audio, image and tabular data and on database projects, whilst performing analysis on results using histograms, line graphs, scatter plots and confusion matrices
- Given presentations to internal and external stakeholders, often with a mix of technical and non-technical audiences
- Written many technical reports using Microsoft Office (using Word and Excel) for internal and external customers and have acted promptly on any feedback provided – one report I contributed to significantly was published online here: <https://www.gov.uk/government/publications/synthetic-data>
- Helped manage projects, liaising with sub-teams, ensuring quality was maintained and targets were met
- Undertook responsibilities such as in working with a partner to liaise with a university in organising recruitment events throughout the year (and attending career fairs), being solely responsible in editing and managing the weekly newsletter for the company and in organising external talks from university lecturers for the team

Luxfer MEL Technologies (Swinton) – Quality Engineer (Jul-Sep 2018)

- Mastered a range of IT skills including Microsoft SharePoint, InfoPath and Excel to assist in modernising the company (to move them from paper-based systems to electronic ones)
- Learnt SharePoint and InfoPath quickly using solely online resources and minimal supervision
- Completed several short and one long IT-based project, acting on regular feedback and implementing changes, whilst working independently to meet deadlines
- Developed intelligent, electronic forms for various areas of the company for internal customers and created online file libraries for them too
- Took initiative and created documentation detailing the system and also taught others how to use it

SKILLS

Leadership	<ul style="list-style-type: none">• Experienced role of a junior project manager at BAE Systems, liaising between teams and people, ensuring technical targets were met and dealing with conflicts• Taken initiative in providing improvements in company processes and products, liaising between teams and taking an active role in implementing the changes directly• At university, had role of Treasurer in Manchester Exchange Society committee, dealing with its finances and society promotion and was a student support leader, working with a co-leader to plan and provide weekly sessions giving guidance, support and motivation to first year students using techniques I received training for
Problem solving	<ul style="list-style-type: none">• Machine learning and data engineering involves constant debugging and extensive research in finding the right tools and solutions, including tools I was initially unfamiliar with (such as Databricks), and often under pressure• My degree and the programming nature of my work has meant I constantly faced problems which were tricky to solve and needed persistence• Outside of the box thinking using programming logic when limitations in SharePoint/InfoPath had to be overcome when developing workflows and electronic forms• MPhys project involved using specialist software with limited documentation and research into a new area (using deep learning to identify cervical cancer tumours)
Technical skills	<ul style="list-style-type: none">• Highly experienced with Windows/Linux and Python and as well as HTML, CSS, JavaScript, SQL and React, working in a range of projects at the company and in my spare time• Provided informal advice• Advanced skills in Microsoft Office (e.g. Word, Excel, PowerPoint, SharePoint, InfoPath, Outlook) including pivot tables/charts, IF/SUM/COUNTIF/SUMPRODUCT functions, conditional formatting, data import via power queries plus VLOOKUP, INDEX/MATCH and many more
Adaptability	<ul style="list-style-type: none">• Learnt new software and technologies on the job quickly when required including Microsoft Azure, Microsoft Teams, Slack, Jira, SQL (via Microsoft SQL Server) and maintaining Databricks notebooks written in Scala• During the COVID-19 pandemic, I successfully adjusted to working remotely full-time and in using collaborative tools including Skype, MS Teams, Slack, Outlook, WebEx and Git• Studied abroad in the USA during third year at university and had to quickly adapt to a new culture, and a new way of learning through continuous assessment over having one final exam, all in the space of a week• Gained benefits such as greater independence, increased organisational skills and flexibility, improved time management and a broader outlook on the world so am now excited to take on any new challenging opportunities, rather than be daunted by it
Teamwork	<ul style="list-style-type: none">• Worked on technical projects, often collaborating with other teams and organisations using Agile and through Jira tickets, or Slack threads• Worked on technical tasks together in pairs and helped support the team when needed by sharing findings and information that could help them in their work• Collaborated with project managers and colleagues from all levels to get the job done• Undertook volunteering opportunities during my time abroad such as a visit to a busy YMCA location in Chicago, where I had to work as a part of a team to organise and distribute donations, as well as working in small groups as part of an intensive tree planting project in Indianapolis• Worked closely with the University of Manchester Exchange Society committee as part of my Treasurer duties to organise events whilst staying within a tight budget
Communication	<ul style="list-style-type: none">• Greatly enhanced my written and verbal skills through presentations and technical reports (including internal and external stakeholders without a technical background)• Taken responsibilities such as in arranging recruitment events with an assigned university, in producing the weekly company newsletter and organising external talks for the team• Improved on my organisation skills and planning to consistently meet tight budgets/deadlines• Partook in daily stand-ups, raising any concerns quickly and seeking help when needed, and also engaged with external suppliers, users and post-incident review management when investigating problems and explaining root causes to those unfamiliar with the systems• Assisted at company fairs, giving talks to technical and non-technical people about the work conducted in order to obtain funding and to increase collaboration• Volunteered abroad in South Korea for 2 months at a conversation café in order to help locals with their English skills through conversations, guided debates and some teaching

ACTIVITIES AND INTERESTS

I enjoy travelling and spent time in Latin America taking classes for dancing and Spanish to an intermediate level.

I also like to learn about other cultures and follow world events in order to give myself a global mindset, and am constantly also trying to improve my current skillset, such as web development.