Name: Andrew

Job title: GIS Analyst

Organisation: Greater Manchester Combined Authority (GMCA)

A short summary of your role:

I work as a GIS and data analyst for the Research Team at the Greater Manchester Combined Authority. My responsibilities vary widely and include general data mapping and map making, helping construct reports, developing project plans, and ensuring that MappingGM (The Combined Authority's main geospatial data website) is up to date with the latest geospatial data.

I work across various research/policy areas from digital services to environmental services. Most of my work is desk-based but I travel around the Greater Manchester area regularly and sometimes to other cities in the UK such as London or Birmingham.

Your background (field of study, previous roles, interests)

I come from a working class background and began studying geography at GCSE when I was in secondary school in Lancashire. My interest in geosciences developed rapidly and I subsequently studied geography at A-level.

I then applied for a Royal Geographical Society Gap Year Scholarship. The aim of this programme was to allow disadvantaged students to undertake a gap year before university, with the aim of developing ones geographic knowledge through work experience, wider travel, or both.

I was successful with my application and was lucky enough to travel to Hong Kong, New Zealand, the USA, Canada, Bolivia and Chile over an 8 month period. Whilst in the USA I undertook an internship with the USGS where I developed my GIS capabilities and worked on research projects which focused on seismicity and geophysics.

I then undertook a BSc Geography and Natural Hazards degree at Coventry University in September 2014 and began my 4 year undergraduate journey. Throughout my degree I studied a wide range of topics from geology to international development and disaster management.

My Geographical knowledge was further developed by undertaking an internship with the Asian Disaster Preparedness Centre (ADPC) and a sandwich year placement with EduCARE India. Whilst working for the ADPC I was involved in drafting disaster impact questionnaires and also travelled to Nepal to carry out an earthquake damage survey. For EduCARE India I worked as a project manager for disaster management and forestry in Himachal Pradesh in the Himalayas. Many of my projects centred on reforestation, flood and landslide mitigation and environmental education.

My interests as evidenced by my background vary widely, but out of all of my interests I am extremely passionate about disaster management, GIS, international development and urban planning.

What skills are needed to do the job that you do?

The skills needed include the following

- *GIS skills- the ability to use GIS software, such as QGIS, MapInfo or ArcGIS.*
- *Analytical skills- such as the ability to analyse data in Microsoft Excel.*
- *Ability to work independently*
- *Teamwork skills*
- *Project management skills*
- *Time management skills*
- *Communication – I deliver various talks and seminars to project partners and stakeholders*

What do you enjoy most about your job?

Firstly, I love making maps. I've always been fascinated by maps and cartography since I starting rummaging through my Dads old National Geographic magazines when I was very young. This role provides me with the opportunity to make really interesting GIS outputs and to work with the latest geospatial datasets.

Secondly, working in regional government research means that the work I do has a wide impact and I enjoy knowing that my job makes a difference to people living in Greater Manchester. The mapping analyses and map outputs I generate provide deeper insights into datasets. The insights then enable policy makers to make more informed decisions when forming government policies around areas such as the environment, digital infrastructure or police and crime.

Thirdly, I co-manage the home of Greater Manchester's geographic data – MappingGM. I enjoy this aspect of my role because being at the forefront of WebGIS is exciting as we're always finding new datasets to visualise and different ways of using MappingGM for the good of the public sector and the public at large. MappingGM hosts a variety of open maps themed around different subject areas ranging from demographics to transport. Through MappingGM we have hosted various public consultations such as the Greater Manchester Spatial Framework (A huge regional infrastructure plan) and the Beeways consultation (Consulting the public on cycling and walking infrastructure). MappingGM has become an indispensable tool at the GMCA and enables us to help the public engage with government plans and policy in a more interactive way.

What would be your advice for anyone who would like to pursue this career path?

I would advise anyone who is interested in becoming a GIS analyst to gain as much work experience as possible whilst at University, this includes short term placements, summer schools or even a sandwich placement (If your degree or university allows). Additionally, I would encourage people who are seeking careers in GIS to find internships or work experience abroad. Working abroad opens many doors, professionally through networking but also personally. On top of this, work experience abroad highlights an individual's ability to adapt and engage in changing and unfamiliar settings.

Employers value these traits, and I would highly recommend people work abroad at some point during their career, but especially in the early stages if possible.

Secondly, I would also recommend people to self-teach themselves various coding languages such as R, Python and SQL. The reason for this, is because coding allows users to manipulate and manage data in different ways and can streamline processes that would otherwise take a significant period of time. This can be very useful when undertaking a number of geospatial analyses.

Finally, another skill which I think geography students lack, on the whole, is that of Microsoft Excel. Excel is used in most office environments, and is essential to office-based careers nowadays. GIS is definitely not an exception. I struggled a little bit after my degree because I didn't use Excel much at university, which was unfortunate as my role requires me to have a decent understanding of Excel. Thankfully my colleagues were very helpful and I was given many hints, tips and online training sessions to get me up to speed. I would encourage prospective GIS analysts to play about with data in Excel and become familiar with the software as it is very likely that you will be processing and cleaning data before you even come close to creating a pretty map.

In your opinion, why is geography important in the world of work?

Geography is vital in working environments because geographers are experts at recognising and analysing connections and the impacts of these relationships on various factors such as profit or policy for instance. Geographers are natural analysts and our skills will always be needed in a huge variety of work places. Geography is such a broad subject that it also equips geographers with a broad background knowledge. This is a massive strength as it gives you a bigger knowledge base to build upon in whatever career you choose.

How have you used your school/university geography in your job?

I utilise my knowledge of GIS systems on a daily basis, the bulk of which I attained whilst at University.