Matheus Gomes
MSc Computer Science & Maths

about

Manchester
UK

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programming

Java,
Python,
C++,
Go

skills

bilingual
English/Portuguese
basic Spanish

Interests

data analysis, machine learning, neural networks, image/signal processing, mathematics, group theory, linear algebra, computer graphics.

University Education

2014-2018 **MComp Computer Science with Mathematics** Sheffield, UK
First Class Masters Degree from The University of Sheffield

In the first couple of years, the workload was evenly split between Mathematics and Computer Science. During this period, I studied topics such as linear algebra, group theory, data analysis and theory of computation. My dissertation was done in the following year, where I studied different machine learning techniques as well as computer vision with OpenCV in order to create Haar Cascade classifiers, which required good image pre-processing steps. Finally, the final year comprised of a Masters project where I further studied computer vision and deep learning techniques in the field of medical imaging, where we developed a workflow for detecting early signs of papilloedema. Similarly, this project made vast use of OpenCV for image processing, Numpy and Pandas for data analysis and mathematics, and Google's TensorFlow for deep learning.

Experience

2018-Current **Software Engineer** AVEVA
C++, OpenGL Engineer

AVEVA is one of the biggest names in the CAD industry. The Manchester office develops a point cloud solution for engineering companies, where clients can view, edit and modify their data. In addition, it can be integrated to other well known CAD solutions, giving users the option of using CAD system with laser data. My job consists of maintaining their desktop application and developing new features (such as the ability to load multiple 3D model files), mainly using C++ and OpenGL. Since the company follows the lean-agile product life cycle, I have learnt to develop features more efficiently in a large team which deals with different customers. In addition, clean code and efficient design patterns are also adopted by the company, hence I have also improved as an engineer during my time at AVEVA.

2018 **Research Software Engineer** OAK Research - Sheffield
Further developed proof of concept masters project

Before joining my permanent job, I was contracted by OAK to further develop the application and workflow researched in my masters project. The job consisted of handing over the proof of concept code, in a way that they could integrate it to their systems, and research some alternatives to improve the overall neural network based classifier. Some of the technology I used in this job were OpenCV (Python binding), TensorFlow, Numpy and Pandas.

2017-2018 **Lab Asisstant** The University of Sheffield
Assisted Undergraduate students with programming tasks.

During my last two years at university, I worked for several different lecturers as a lab assis-

tant. This job consisted of helping students with programming questions and occasionally bug fixing lecturers' code. References can be obtained upon request.

| 2016 | **Research in Speech and Hearing** | The University of Sheffield |

SURE Programme - Undergrad Research

SURE is a scheme at The University of Sheffield which allows selected undergraduate students to gain research experience. I worked with professor Philip Green and my research task consisted of analysing real time MRI images of the vocal tract and estimating parameters of speech for a specific point in time, such as formants, pitch vocal tract area. Most of the work was done in Matlab with the help of a PhD student.

| 2010-2013 | **Content Maker** | Youtube |

Coding and tech tutorial videos.

During my period at high school, I decided to create a **Youtube channel** where I discussed topics such as coding, Photoshop guides and content making. This part time hobby has taught me how to manage my own time as well as providing valuable experience on individual research and content making. In terms of statistics, this channel managed to obtain more than seven thousand subscribers and more than two million views.

Volunteering

| 2016-2017 | **Foodhall Project** | Sheffield, UK |

Helped developing parts of their website, consisting of coding the proposed layout with HTML, CSS and Javascript and integrating it into a Rails app.

| 2017-2018 | **SIBS - Child Supervision** | The University of Sheffield |

Supervisor of activities and outings for groups of children whose siblings suffer from some form of disability.

Previous Education

| 2012-2014 | **A Levels - Aquinas College** | Stockport, UK |

A* - Mathematics
A - Further Mathematics
A - Computing
A - Spanish

| 2009-2012 | **GCSEs - ST Anne's RC School** | Stockport, UK |

Core Sciences (Biology, Chemistry and Physics)
Additional Sciences (Biology, Chemistry and Physics) Mathematics
English
Religious Studies
Product Design
Music
ICT
Spanish
all ranging from A*-C.

Skills and Hobbies

Aside from getting involved in different projects on my free time (mostly RaspberryPi stuff), I enjoy learning to cook different foods as well as trying out different restaurants. In addition, I also take pride in keeping physically fit by going on runs and regularly exercising.