

# Nathan Hughes

DATE OF BIRTH: 05 May 1994  
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## PERSONAL STATEMENT

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I am an extremely driven and motivated student, in all things; I make it my goal everyday to improve upon the last. With a true thirst for knowledge and desire for understanding it is my long-term goal to pursue a career into academia.

Discovering new and interesting problems, discussing them with others, and progressing to solutions is what propels me towards science. I believe that computer science is an excellent tool that can be used to great effects in the field of biology in particular.

## CURRENT STUDY

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	Aberystwyth University - MEng Software Engineering
SEPT 14 - JUNE 2019	I am currently in my second year at university. Having achieved an average of a 2:1 in my first year, I am always striving to improve upon this always and have made a personal goal to reach a 1:1 grade in my second year.

## COMPUTING SKILLS

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Working Knowledge: PHP, MySQL, C#, JavaScript Haskell, Android development  
Advanced Knowledge: C/C++ Java, Image-Analysis, Python, HTML, VB, L<sup>A</sup>T<sub>E</sub>X, UNIX SYSTEMS

## INTERESTS AND ACTIVITIES

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- I spend much of my free time maintaining and improving my piano and guitar skills.
- Having a love of literature I write a lot of poetry and have been featured in a few independent publications ([http://allpoetry.com/Nathan\\_Hughes](http://allpoetry.com/Nathan_Hughes))

## SELF-DRIVEN PROJECTS

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Biology of the cell course	Having fallen in love with biology whilst studying computer science at university, I have started a small project to make a openly available crash-course style of notes for anyone from a non-biology background. I contribute to it quite regularly and plan to complete full series of biology information ( <a href="https://github.com/SirSharpest/Bio-Cramming">https://github.com/SirSharpest/Bio-Cramming</a> )
Python blackboard script	I decided to teach myself python and as I know I am a practical learner I jumped right in and aimed to write a practical application. The application I developed enables university students to download all of their lecture slides and information just by entering their username and password. ( <a href="https://github.com/sirsharpest/blackboard_crawler">https://github.com/sirsharpest/blackboard_crawler</a> )
Image Analysis Software	As a side project I have started building a Rubik's cube solver which uses OpenCV and AStar IDS to provide instructions for a user to complete a cube puzzle. This is in early stages but progress can be seen at my GitHub which is updated almost daily ( <a href="https://github.com/SirSharpest/Rubkis-Cube-Solver">https://github.com/SirSharpest/Rubkis-Cube-Solver</a> )

## WORK HISTORY

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MAY 2016 - CURRENT	<b>National Plant Phenomics Center - Programmer / Systems Developer</b> My role at the NPPC has been extremely varied. I have worked on building and redesigning a Gravimetrics system for plant phenotyping and data generation. My favourite role has been in creating image analysis algorithms, used to generate and process data gathered from various systems that the center uses.
SEPT 2015 - CURRENT	<b>Aberystwyth University - Undergraduate Demonstrator</b> Having performed well in my first year of study at Aberystwyth University, I had been hired as an undergraduate demonstrator. For this I act as a mentor to first year students during their practicals. Specifically I help to reinforce the knowledge students learn in their lectures by guiding them in their practical sessions.
MAY - SEPT 2013	<b>Belfast Metropolitan College - Information Systems Specialist</b> I had been employed as an IS advisor/specialist by BMC to help with their multi-campus systems upgrade. It was my task to set-up the new system and install it. Once this had been done I went on to offer support and to conduct tutorial sessions for any users which may have felt uncomfortable with such a large change to the information system that they had previously used.
JUNE - OCT 2013	<b>Dromore Leader / Banbridge Chronicle - Journalist and Contributor</b> Over the course of several months that I was between education and working, I contributed regularly to my local news papers; I wrote articles on social issues, sports and even had a few of my creative writing pieces published also.
FEB 09 - MARCH 2013	<b>Salto National Gymnastics Center - Gymnastics Coach</b> I worked extensively with children and young adults, coaching at both a recreational and an elite level. Whilst working here I gained valuable experience in working with children from the age of 3 and up; through this I have learnt how to interact professionally with a wide range of ages. My main responsibilities as a coach was to provide a safe, fun and educational environment for those that I taught.

## EDUCATION

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MAY 2014	<b>BTEC Extended Diploma</b>   Final Grade: Distinction* Distinction* Distinction
MARCH 2012	<b>Artistic Gymnastic Qualifications</b>   Final Grade: Pass
FEBRUARY 2012	<b>Gymnastics Judge Examinations</b>   Final Grade: Pass
JUNE 2010	<b>GCSE English, Maths, Literature, IT and Physics</b>   Final Grades: Pass

## REFERENCES

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PHILLIP GREENWOOD	<b>BMC Project Manager</b>   <a href="mailto:PGreenwood@belfastmet.ac.uk">PGreenwood@belfastmet.ac.uk</a>
HANNAH DEE	<b>Senior Lecturer</b>   <a href="mailto:hmd@aber.ac.uk">hmd@aber.ac.uk</a>
COLIN SAUZE	<b>Data Manager NPPC</b>   <a href="mailto:cos@aber.ac.uk">cos@aber.ac.uk</a>

## TALKS AND PUBLICATIONS

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TALK AT BCS MEETUP	<b>Show and Tell event</b>   <a href="http://midwales.bcs.org/show-and-tell-events/">http://midwales.bcs.org/show-and-tell-events/</a>
POSTER PRESENTED AT BMVA	<b>Plants and computer vision</b>   <a href="http://www.bmva.org/">http://www.bmva.org/</a>
TALK AT BIOINFORMATICS	<b>Bioinformatics workshop</b>   <a href="http://www.users.aber.ac.uk/msn/abw/">www.users.aber.ac.uk/msn/abw/</a>
TALK AT FOSDEM	<b>Lightning Talk</b>   <a href="https://fosdem.org/2017/schedule/">https://fosdem.org/2017/schedule/</a>
ARTICLE IN GARNET	<b>BMVA meeting writeup</b>   <a href="http://www.garnetcommunity.org.uk/">http://www.garnetcommunity.org.uk/</a>