

Andrew Mulholland

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Blog: <http://pi.gbaman.info/> | GitHub: <https://github.com/gbaman>

Education

Queens University -- Belfast, Northern Ireland

Pursuing BSc Computer Science, Expected Graduation: May 2018

Semester 1 Courses (Completed)

Computer Architecture

Introduction to the Science of Computing

Fundamentals of Programming (Section 1)

Semester 2 Courses (Due to be completed)

Introduction to Software Engineering and
Project Management

Reasoning for Problem Solving

Fundamentals of Programming (Section 2)

Attended **Dalriada School** -- Ballymoney, Northern Ireland

A-levels

Moving Image Arts - A

Computing - B

Mathematics - C

Work Experience

10.2014 - present **Voluntary Computer Science teacher** *Victoria College -- Belfast, Northern Ireland*

Teaching/mentoring a group of 20 year 9 (age 12) students in First Lego League robotics competition. Through their hard work and determination, they went on to be chosen to represent Northern Ireland in the UK finals. (Average 6 hours a week - from October to January).

Teaching two timetabled year nine (age 12) ICT classes of 26 students, basic computer programming using MinecraftEDU. (1 hour a week from February to Present).

08.2014 - 1 week **Education Resource developer** *Raspberry Pi Foundation -- Cambridge, England*

Collaborating with another placement student to develop an educational resource for kids from the ground up, including hardware design and code.

08.2013, 08.2014 **Lead tutor - Raspberry Pi** *Techcamp -- Winchester, England*

Designed and led the Raspberry Pi beginners and advanced courses at a residential technology camp for children 9-18.

06.2014 - present **Northern Ireland Raspberry Jam lead** *Farset Labs -- Belfast, Northern Ireland*

Coordinating and running the Northern Ireland Raspberry Jam for more than 30 kids. Includes resource development, full equipment setup and teaching. (one Saturday a month)

04.2013 - 1 week **Work experience** *Nitec Solutions -- Antrim, Northern Ireland*

Worked with a number of teams including Software Development, Engineering, Technical Support and Sales. Also had a chance to interact with a number of customers and assist a senior engineer with installation of a batch of new computers.

Projects

06.2013 - present **RaspberryPi - LTSP** <https://pi-ltsp.net>

Free, extensively documented and open source software for managing a large set of Raspberry Pi's on a network; officially recommended by the Raspberry Pi Foundation and *used worldwide, by more than 100 schools*.

Skills and experience gained: understanding of **Linux** operating systems **architecture**, experience using **Ubuntu Linux**, **maintaining a community** and providing **project support to schools**.

07.2013 - 06.2014 **Pi_Connector** (retired) https://github.com/gbaman/Pi_Connector

Free and open source software for managing a Linux based classroom of computers. It features a simple commandline-based frontend for management, user accounts and a dynamically generated menu system.

Skills and experience gained: **multithreading**, **object-oriented Python** and **network socket communication**.

11.2014 **Arduino-based Light Painter** <https://github.com/gbaman/Light-painter>

A fully documented open source project using Arduino microcontroller and a strip of Adafruit full RGB Neopixel LEDs, controlled by a Python program, which processes an image input and outputs C++ code (with the embedded image), which can then be uploaded to the Arduino. Working with extremely limited resources (128KB flash).

Skills and experience gained: **low level microcontroller programming**.

Awards

UK Overall TalkTalk Digital Hero Award 2014 - recognition for people who use technology to improve their communities <http://digitalheroes.talktalk.co.uk/2014-winners/>

Northern Ireland Senior Young Innovators Award 2014 - for my work on the Dalriada Robotics club Flatpackable Cardboard Quadcopter

Two Gold CREST awards from the **British Science Association**

- "Cardboard Quadcopter" (2014)
- "Innovative teaching with Raspberry Pi in Northern Irish schools" (2013)

Presentations

01.2015	Raspberry Pi Foundation stage at BETT	"RaspberryPi-LTSP"
12.2014	TeachMeet Northwest, Coleraine	"Computer Science in Northern Ireland"
05.2014	Computing at Schools UK Teachers Conference , Birmingham	"Robotics in the Classroom"
03.2014	Manchester Raspberry Jamboree	"Introducing RaspberryPi-LTSP"
11.2013	Osiris Future of Computing Conference	"The Potential of Raspberry Pi in Education"
10.2013	TeachMeet , Belfast	"Robotics in Schools"

Referee

Deirdre Turkington – Assistant head teacher, Victoria College

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