

# Curriculum Vitae: Joseph David Ruff

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## Education

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**Loughborough University** Leicestershire, United Kingdom  
*Computer Science BSc; Second Class Honours, Upper Division* 2014 - 2017

**Part A (First Year):** Essential Skills for Computing, Introduction to Algorithms, Logic and Functional Programming, Programming for the WWW, Server Side Programming, Computer Systems, Databases, Mathematics for Computer Science, Object Oriented Programming and Algorithms

**Part B (Second Year):** Requirements Engineering, Formal Languages and Theory of Computation, AI Methods, Computer Graphics, Formal Specification, Mobile Application Development, Professional Issues in Computing, Operating Systems Networks and the Internet 1 & 2, Team Projects, Professional Training Preparation

**Part C (Third Year):** Robotics, Enterprise Resource Planning Systems, Algorithm Analysis, Human-Computer Interaction, Data Mining, Cryptography and Network Security, Computer Vision, Computer Animation, Computer Science Project, Software Project Management

**Ashcroft Technology Academy** London, United Kingdom  
*GCSE & A level* 2007 - 2014

**A2:** Mathematics, B; Physics, C; Computer Science, B

**AS:** Biology, D

**BTEC:** level 2 Engineering, Distinction; OCR ICT, Merit

**GCSE:** Maths Applications, A\*; Mathematical Methods, A\*; Science, A; Additional Science, A\*; English Language, B; English Literature, B; Citizenship (1/2), A; R.S (1/2), A; Business, B; Geography, B; Music, C

## Technical Skills

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Familiar with:

**Programming Languages:** C, C++, Java, Haskell, HTML, CSS, JavaScript, PHP, Matlab, Visual Basic.net, Python

**Source Control Systems:** TortoiseHg (Mercurial)

**ERP Systems:** SAP

**Data Mining Software:** WEKA

**CAD Systems:** PRO Desktop, 2D Design

**Operating Systems:** Windows (XP to Windows 10), Mac OS, Linux (Raspbian)

**Software:** Microsoft Office (Word, Excel, PowerPoint etc.)

## Work Experience

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**Medical Physics and Bio-engineering, UCLH** Bloomsbury, London  
*Year 10 Work Experience* 2011

**Cranioplasty plates:** Took part in a full demonstration of how cranioplasty plates were made. Included use of bespoke CAD software as well as various workshop machines and tools. Demonstrated ability to use skills and knowledge learned in engineering class, outside of the school environment. Followed strict health and safety rules.

**Repairing Keyboards:** The bulk of my time spent at UCLH was spent repairing hospital keyboards. These keyboards were designed to be covered by a flat silicon surface to allow them to be easily cleaned. Repair process involved testing to see which part of the keyboard was broken, disassembling the keyboard, setting the broken components aside and reassembling the working parts into full keyboards. Demonstrated ability to quickly learn and perform a task.

## Medical Physics and Bio-engineering, UCLH

Bloomsbury, London

*Year 12 Work Experience*

2013

Raspberry Pi & Python: Was tasked with setting up a Raspberry Pi, and producing a python program to display a timetable. This involved me learning to code Python, as well as use a Raspberry Pi computer. Prior to this task being set I had only programmed in Visual Basic.net. Demonstrated ability to work with unfamiliar hardware and software, as well as learn a new programming language.

## Mermaid theatre

Blackfriars, London

*International Magic Convention Gala Show*

2013

Stage hand: Worked backstage at international magic show. Had to learn various stage cues and instructions at short notice, and carry them out as part of a small team. Carried out important tasks effectively with a team whilst under pressure. Was able to work quickly to carry out tasks that needed to be finished within a time limit.

## Ian Roscoe Garden Services LTD

Richmond, London

*Summer job*

2016

Gardener: Worked as a gardener for a company based in Richmond. This involved assisting one of the company owners and helping her perform her various day to day jobs for clients. Performed physically tiring tasks outside in varying weather conditions. Had to learn to perform tasks quickly and efficiently to maximise number of clients seen in a day.

## Projects

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**My final year project:** Tasked with writing a program to visualise Conway's Game of Life and other Cellular Automata. Designed for usage at departmental recruitment events. Program had to be visually appealing and enable users to better understand cellular automata.

Finished program was written in Java to facilitate usage across multiple operating systems. Program features allowed user to pause, play, adjust speed, and manually go back and forward through each individual generation in the simulation. Other features allowed the user to visualise the changes that occurred in between generations and keep track of the number of living and dead cells. Simulations could be saved and loaded and the rules to Conway's Game of Life were not hard coded and could be changed in order to simulate other lifelike cellular automata.

Demonstrated ability to learn an unfamiliar programming language, as well as program a functional animation engine. Used TortoiseHg source control system to manage updates and changes.

**A Level Project:** Was a continuation of my year 12 work experience at UCLH. The task was to complete a timetable coded in python and run on a Raspberry Pi computer. Program appointment information from a text file and then displayed them on screen in order of time. I made use of the pygame library to display text onto a screen and read from and wrote to a text file to get and store appointment information.

Required me to learn an, at the time, unfamiliar programming language and hardware.

## Additional Information

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**Personal Profile and Skills:** Throughout my time in education I have always worked well both in a team and on my own. I have always been good at using computers, both for completing work at school and playing games at home and with my friends. I enjoy playing games on both tabletop as well as the computer, I frequently organise whole days with my friends dedicated to playing boardgames. I've been playing classical guitar since primary school, and also enjoy listening to music.

**Interests:** Classical Guitar, Tabletop Gaming, Computer Gaming, Programming

**References:** Available upon request.