

# Ray Garner

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## Personal Profile

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I chose to study Computer Science because I find the work of software engineers like John Carmack and Linus Torvalds highly inspiring and also because I find programming exercises my imagination in a unique way. Developing software gives me a similar sense of satisfaction as composing music does, a prolific hobby of mine. Along with composing music, I have enjoyed playing in a variety of musical ensembles for several years now. This experience gave me the opportunity to practice my teamwork skills and creativity to a great extent, which quickly became useful during the group work modules of my degree studies.

## Education and Qualifications

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### University of Nottingham

- **2020-Present** - Studying in 2nd year of Computer Science Bsc. Core modules include software engineering group project, operating systems & concurrency, algorithms & efficiency and I've opted for optional modules in advanced functional programming, C++ programming and AI methods. For the group project my team and I are creating a system with our sponsor, IBM, which will allow Access To Work users and support workers to easily connect and co-operate.
- **2019-2020** - Attained a 1st with 87% overall in year 1 of Computer Science Bsc. Core modules included programming & algorithms, maths for computer science, systems & architecture, databases & interfaces and fundamentals of AI.

### Wigston Academy Trust

- **2017-2019** - Achieved A, A, B in A-Level Computer Science, Music Technology and Music
- **2015-2017** - Passed 11 GCSEs with grades A\*-B

### RSL

- **2018** - Passed Grade 8 electric guitar with merit

## Software Tools Experience

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| Software development | vim, gcc, gdb, ghc, vscode, Eclipse IDE, JUnit testing, MATLAB, Visual Studio, Chrome dev tools, git, make     |
| Multimedia           | Reaper, Cubase, Ardour, ffmpeg, Audacity, Avid Sibelius, Musescore, GIMP, Blender                              |
| Network tools        | ftp, ssh, Citrix Receiver, VMware Horizon, TeamViewer  |
| Design               | Google SketchUp, Circuit Wizard  |
| Languages            | C, ARM asm, Java, Haskell, MySQL, JavaScript, PHP, VB.NET, shell script, HTML, CSS, $\text{\LaTeX}$ , Markdown |
| Operating systems    | Arch Linux, Debian Linux, Windows 7 onwards, macOS Sierra onwards  |

## Software Development Projects

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- **2019-Present** Maintain shell scripts to automate the installation and configuration of Arch Linux to my preferences
- **2020** - Created a shell script wrapper for mpv and ffmpeg to create a multi-track recording tool
- **2020** - Programmed a chess engine in Haskell using an alpha-beta search with a university colleague and later developed a faster version of the program in C
- **2020** - Set up a film database website using HTML, CSS, JavaScript, PHP and MySQL for the coursework in the databases and interfaces module in year one of my degree. I now maintain raygarner.co.uk as a portfolio using skills I learned during that project

- **2020** - Wrote JUnit tests to debug a faulty finance app in the first group work module of my degree and also used git for version control
- **2020** - Utilised the Java GUI library “swing” and object oriented programming techniques to create a Minesweeper game as a university assignment
- **2019** - Completed various assignment exercises to gain experience with C, ARM asm, Java and Haskell during the first year of my degree
- **2018-2019** - Created a primitive chess engine using VB.NET for A-Level Computer Science coursework for the college chess club

## Work Experience

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### **2017-2019 - Perfectcast Ltd**

- Set up a Blender renderfarm
- Installed a Cisco video conference system
- Upgraded laptop hardware
- Performed corporate laptop imaging
- Carried out end-user and network IT support

### **2019 - The Little Theatre**

- Played as the guitarist for their production of Cats

### **2016-2019 - Wigston Academy Trust**

- Played as the guitarist for the shows Joseph and his amazing Technicolor Dreamcoat, Little Shop of Horrors, Annie and School of Rock
- Recording technician for GCSE Music recitals

## Other Experience

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### **Music**

- **2019** - Played as lead guitarist and co-producer in Leicester math-rock band “PE Department”
- **2017-2019** - Performed as lead guitarist in the Wigston College Jazz Band
- **2015-2019** - Performed as lead guitarist in Leicester alt-rock band “The Scrubs”
- **2014** - Sung in the choir in “The Armed man: A mass for Peace” at the Royal Albert Hall
- **2014** - Played guitar in Rhys Chatham’s “A Secret Rose” Birmingham Town Hall performance

### **Chess**

- **2019-Present** - Member of the University of Nottingham Chess Society
- **2018-2019** - Head of the Wigston College Chess Club

**References available upon request**