# Charlie Street

7 Cassiobury Road,
Weymouth,
Dorset.
DT4 7JN.

07917601977
me@charliestreet.net

*As a highly driven individual with a strong academic record, I throw myself into any challenge I am confronted with. With extra-curricular experience working in teams, I believe I can add value to any team-based project.*

## Education

- **University (2014-2018)** Studying MSci Computer Science at the University of Birmingham.
  - Achieved average grades of **94%**, **95%** and **89.5%** in my first 3 years respectively.
  - Won Best in Degree Programme 2014/15, 2015/16 & 2016/17.
  - Won BCS Prize for Best in Year 2014/15.
  - Won IBM Team Project Prize 2015/16.
  - Awarded School of Computer Science Excellence Scholarship during first year.
  - In April 2018 I submitted my master's dissertation titled: 'IntelliJam: An Intelligent Agent for Musical Improvisation'.
  - Currently in my final (fourth) year.
  - Completed modules in Intelligent Robotics, Machine Learning, Neural Computation, Operating Systems, Networks, Functional Programming and Computer Security among others.
- **A Level (2012-2014)** Studied at the Thomas Hardye Sixth Form, Dorchester.
  - Achieved an A* in A Level Maths, Physics and Computing and an A grade in AS Further Maths and Chemistry.

## Technical Skills

### Programming Languages

| | |
|---|---|
| **C** | I have strong experience with memory management, pointers etc. |
| **C++** | I can use classes and templates on top of the underlying C functionality. |
| **Python** | I have familiarity with Python, having used it for Machine Learning/Robotics applications. |
| **Haskell** | I have a reasonable understanding of Haskell and the functional paradigm. |
| **Agda** | I can formulate inductive proofs over basic numbering systems and data structures. |
| **Java** | I have a strong level of proficiency, having used Java heavily during my time at university. |
| **OCaml** | I have an understanding of the syntax and underlying concepts of the language. |
| **JavaScript** | I possess basic knowledge of the language to add functionality to web pages. |

### Other

| | |
|---|---|
| **Git** | I have experience using Git, having used it for any significant project I have partaken in. |
| **LaTeX** | I've produced many documents in LaTeX, notably my dissertation. |
| **Matlab** | I can use Matlab to carry out a variety of mathematical/graphical functions. |

## Projects

- **IntelliJam (2017-2018)** The software created alongside my master's dissertation. IntelliJam uses Fractal Prediction Machines to allow a guitar player to play whilst connected to a computer and have an agent respond to their playing with new musical phrases in real time. In addition to the agent, a new method of melody extraction based on spectrogram filtering was devised.
- **Dating Chat-Bot for 'The Gadget Show' (2016)** A project for the TV show to create a bot to partake in speed-dating. The goal was for an unknowing subject to choose the bot over a human. I led the back-end/AI sub-team; I was the majority contributor to the design and implementation of the bot. This forced me to think creatively while under time-pressure.
- **Simulizer (2016-2017)** A project initially undertaken for a second year module but continued since. Simulizer is a simulator and visualiser for a MIPS R3000 processor. Working in a team of 5, I was in charge of the back-end, requiring me to write a faithful simulation of the R3000 processor, including a primitive pipeline for execution. This has since been used as a significant teaching aid for the 'Computer Systems & Architecture' module at the University of Birmingham. Students had to write assignments in Simulizer; the assignments were graded using the software.
- **Pedalo (2017)** In September 2017 I was invited to Hack The North at the University of Waterloo, Canada's largest 'hackathon'. While there, I was part of the team who created Pedalo, providing certificate verification on the Ethereum blockchain. Pedalo was awarded the 'best use of blockchain' prize by ConsenSys.
- **Hack The Midlands (2016/2017)** In 2016 I was placed 2nd at Hack The Midlands for creating DanceAuth: authentication via the user's dance moves. At the same event in 2017 I was placed 3rd for creating Vox: a system that makes an electric guitar 'speak' using a text-to-speech engine.

## Extra-Curricular Interests And Experiences

- **Music** I am an avid musician, having played the guitar since the age of 12 with interest in many musical genres. This has required great commitment and perseverance. Previously, I have been lead guitarist/backing vocalist for a rock covers band. Being an active member of a band has improved my ability to cooperate well within a group and listen to those around me.
- **Duke Of Edinburgh Award** I've completed all 3 levels of the DofE award scheme. This required large amounts of team-work and communication, particularly during expeditions, which involved working in a team of 4 for 4 days on Dartmoor. This greatly benefit my leadership skills. I also partook in voluntary work including working in a local charity shop and aiding restoration work along a canal near Gloucester.

## References

Prof. Peter Tino: `P.Tino@cs.bham.ac.uk`
School of Computer Science,
University of Birmingham,
Birmingham,
West Midlands.
B15 2TT.

Prof. Jeremy Wyatt: `J.L.Wyatt@cs.bham.ac.uk`
School of Computer Science,
University of Birmingham,
Birmingham,
West Midlands.
B15 2TT.