


# Patrick Ellis

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## Education

### University of Sheffield

Sheffield, United Kingdom

*Computer Science MComp (Predicted 2:1)*

*Sep. 2016 – Jul. 2021*

- **Advanced Programming Topics (79%)** - Programming centered module involving concepts in functional programming and complexity analysis
- **Human Centred Systems Design (83%)** - Concerns the analysis, design, implementation and evaluation of interactive computing systems for human use
- **Finance and Law for Engineers (70%)** - provided key insight into financial risk management both inside and outside the context of engineering projects, as well as the legal aspects of entering into contracts for the development and delivery of such projects.
- **Web and Internet Technology (73%)** - Responsive web design, accessibility management, network protocols and the technical and social intricacies behind them.
- **Genesys (Ongoing)** - Final year project focused on the development of a business model and software application aimed at improving sustainability for real consumers, using agile software engineering and lean startup practices. In my case this is a user friendly automatic scheduling service targeted at both students and young professionals.
- **Algorithms and data structures** - high level understanding of the design and analysis of efficient algorithms and data structures via illustrative and fundamental problems: searching, sorting, graph algorithms, and combinatorial problems.
- **Modelling and Simulation of Natural Systems** - practical outline and demonstrative techniques for the mathematical modelling and simulation of natural systems, including differential equation and individual based methods.

### Nottingham High School

Nottingham, United Kingdom

*Sep. 2009 – Jul. 2016*

- **A Levels:** Mathematics (A), French(A), Biology(B)
  - **AS Levels:** Chemistry(B)
  - **GCSEs:** 11 (7 A\*s, 4As) including Mathematics, Sciences and English Language and Literature.
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## Coding Projects

- Fully optimised implementation of NLP modelling techniques relating to document retrieval, sentiment analysis, and NER (Named Entity Recognition).
  - Implementation, visualisation and comprehensive analysis of many major algorithms and computational models such as linear regression, MCMC and several related sampling methods, sorting algorithms, bio-inspired genetic algorithms and cellular automata.
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## Experience

### Software Engineer Summer Internship

June 2020 – August 2020

*ANS Digital and Cloud Experts*

*Remote*

- Research on cloud storage and insight into the global shift towards it.
- First hand experience of new development tools and programming languages, such as Coypu and the Selenium WebDriver.
- Managed an individual project that involved development of a application based booking service for office spaces, part of a scheme to help employees return to work safely.

## Office Apprentice

*Franklin Ellis Architects*

Aug 2019 – Aug 2020

*Nottingham, United Kingdom*

- Duties included managing the office phone line, interacting with clients, as well as aiding and directing their queries.
- Developed team working and communication skills through planned collaboration with my colleagues to handle daily challenges.

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## Skills

- Recent experience working with databases and related technologies, including experience with large data sets and machine learning techniques.
- Experienced with agile development methodologies, including iterative development and extensive unit testing.
- Formidable analytical skills in mathematics, and extensive knowledge of mathematical theories and techniques including statistical analysis, numerical analysis and stochastic calculus.
- Especially strong developer skills in low-latency object-oriented / scripting programming, including Python and C.

**Languages:** Python, Haskell (functional programming), C#, SQL, JavaScript, HTML/CSS

**Developer Tools:** Jupyter Notebooks, Git, Google Cloud Platform, VS Code