Sam Ellis

Data Analyst, Nottingham

| Experience | Present SEP 2022 | Graduate Data Analyst — Experian, Nottingham/Remote Facilitating access to fair and affordable credit. 🚀 |
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| | JUN 2022 JUN 2020 | Trading Assistant — <i>Sainsbury's, Nottingham</i> Worked as a general trading assistant during university summer breaks and throughout my MSc in Computer Science. Work involved general stock rotation and processing customer transactions. |
| Education | DEC 2021 SEP 2020 | MSc Computer Science — University of Nottingham Graduated with a distinction (first-class equivalent). Modules include: MSc Research Project; Conceptual Programming; Data Modelling and Analysis; Databases, Interfaces and Software Design Principles; and Systems and Networks. |
| | JUN 2020 SEP 2017 | BEng Chemical Engineering — University of Birmingham Graduated with a first-class honours. Modules include: Mass, Heat and Momentum Transfer; Principles of Process Control; Process Integration and Unit Operations; Product Design Exercises; and Sustainable Process Engineering. |
| | AUG 2017 SEP 2015 | A-Levels — <i>The South Wolds Academy and Sixth Form</i> Achieved three A grades in biology, chemistry and maths and an A* grade in music. Achieved subject award for exceptional performance in A-Level Chemistry. |
| Skills | Tools | AutoCAD, Git, Microsoft Excel, SimSci PRO/II, Simulink. |
| | Languages | Proficient — Python, Lua Familiar — SQL, TypeScript Working Knowledge — Go Web — HTML, CSS, Angular2 (Familiar) |

Projects MSc Research Project 2021 — Conducted research centralised around the project topic 'Predicting Keystrokes using an Audio Side-Channel Attack and Machine Learning'. The project implemented a keylogger which could be used to map keystroke signals to their relevant keystroke emanation to generate a supervised dataset. Multiple datasets from different users were created and evaluated using state-of-the-art machine learning approaches. Key findings from this research included a keystroke recovery rate of up to 89% from a 40-key classification problem, and the use of a novel cross-prediction attack to significantly enhance recovery rate. I received a high first in this project.

Data Analysis Report 2021— Using R, preprocessing, reduction, and transformation were performed on a real-world dataset (the SDSS DR14 dataset). After subsequent treatment, the effects of combining alternate pre-processing methods on multiple clustering and classification methods were studied. Analysis and proposed methods for preprocessing and classification were summarised in a written report. I received a high 2:1 in this report.

Design Project 2020 — Designed a pectin manufacturing process capable of producing 142 tonnes of pectin per annum from raw waste orange peel. The project involved the completion of Hazard Studies 1, 2, and 3; an initial scheme report and mass/energy balance; data specification sheets; an oral presentation focusing on the pectin process design; cash-flow analysis detailing profits, operational costs, fixed costs, and capital costs; a complex Piping and Instrumentation Diagram; and an individual detailed design on a distillation column. I received a first in this project.

Automated Distillation Column Design 2020 — Designed an ethanol-recovery distillation column using MATLAB which called raw data from a group Excel spreadsheet, and used this to calculate essential design parameters for the column. These parameters would change depending on other members' design considerations being inputted into the spreadsheet. I received a first in this project.