Computer Science at BGS

Mr Osborne, Subject Lead for Computer Science

It has been a busy few months for the Year 13 Computer Science cohort, busily putting the finishing touches to their Computer Science NEA (Non-exam assessment) projects. The students' work is impressive, with some of the submissions well beyond the standard required of the A-Level specification - often the product of substantial numbers of hours work planning, researching and coding to produce such polished projects. A showcase of some of the very best work is included below.

BGS PATHFINDing

Adhish Sunishkumar

A few snapshots of the work Adhish created on 'BGS PATHFINDing' an app to help students at BGS navigate their way around the newly implemented 'one-way system' and to formulate the shortest path to their next class using the A* pathfinding algorithm.

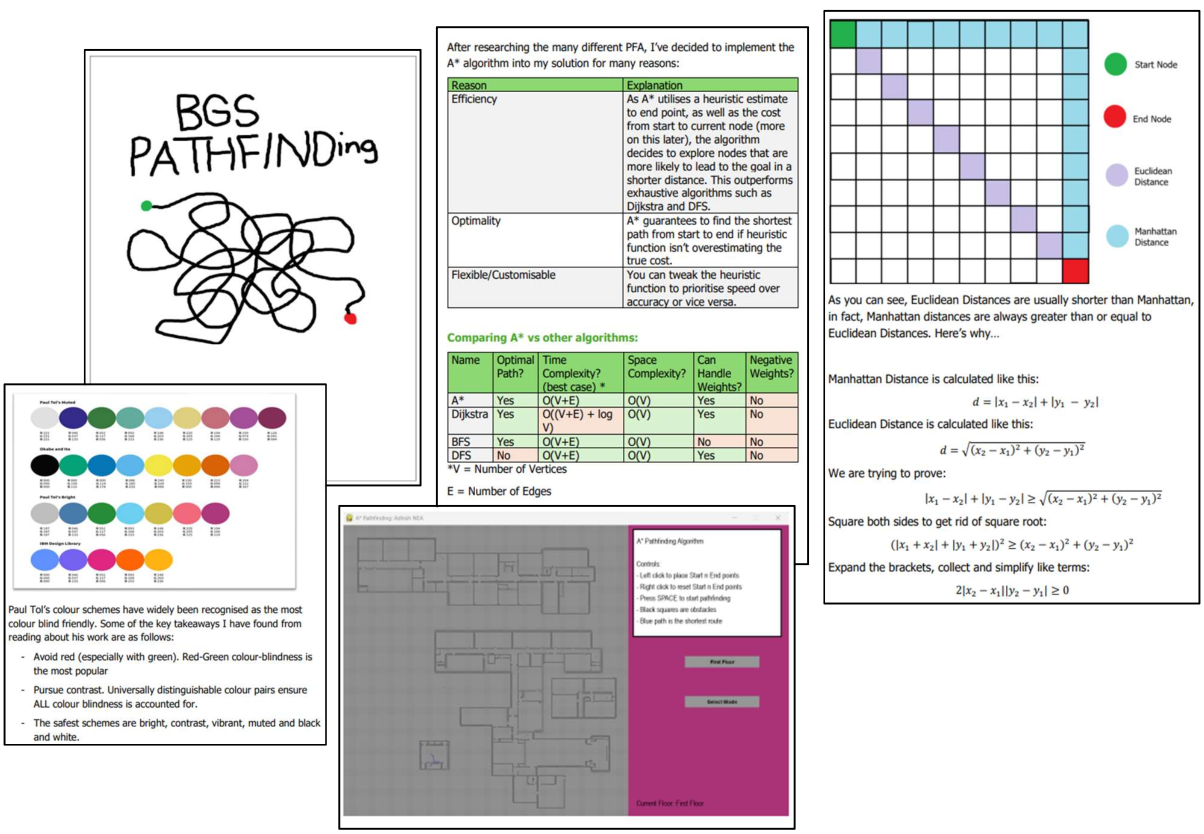

Figure 1: BGS PATHFINDing - Adhish Sunishkumar

Nature in Motion, a predator-prey simulation

Atiksh Agnihotri

Here Atiksh created a tool for biology teachers to help them teach the dynamics of the predator-prey interaction. This project explores predator-prey dynamics, which have been modelled using digital creatures on a grid and producing graphs using the Lotka-Volterra differential equations.

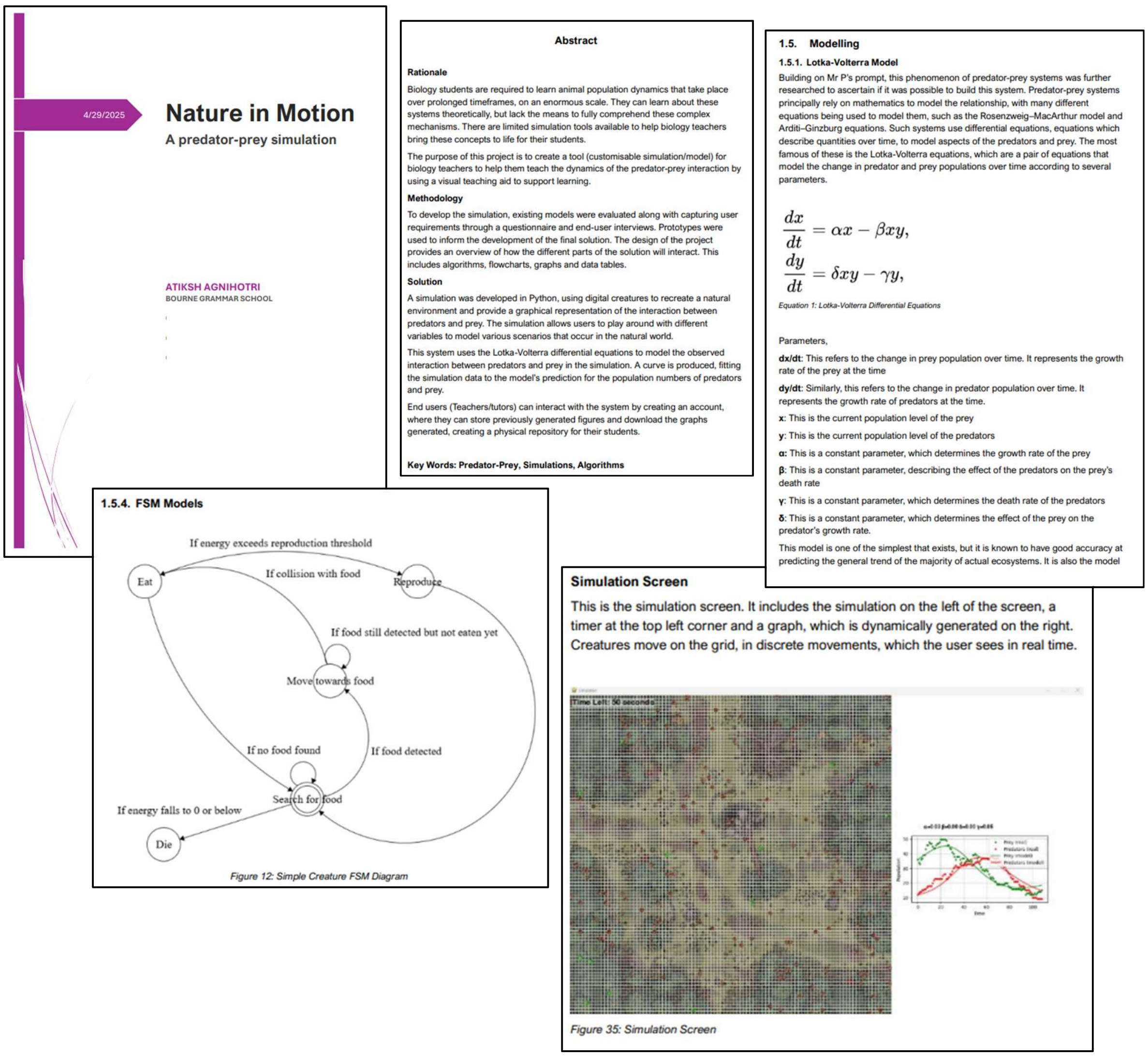

Figure 2: Nature in Motion, a predator-prey simulation - Atiksh Agnihotri

Census Data Presentation Program: Sexual Orientation

Courtney Pudney

For her project, Courtney decided upon some form of data visualisation software, opting to create a census dataset visualisation of sexual orientation within England and Wales. A difficult project that needed understanding of SQL, Pandas (a Python Data Analysis Library), TKinter and application of sorting algorithms such as ‘merge sort’.

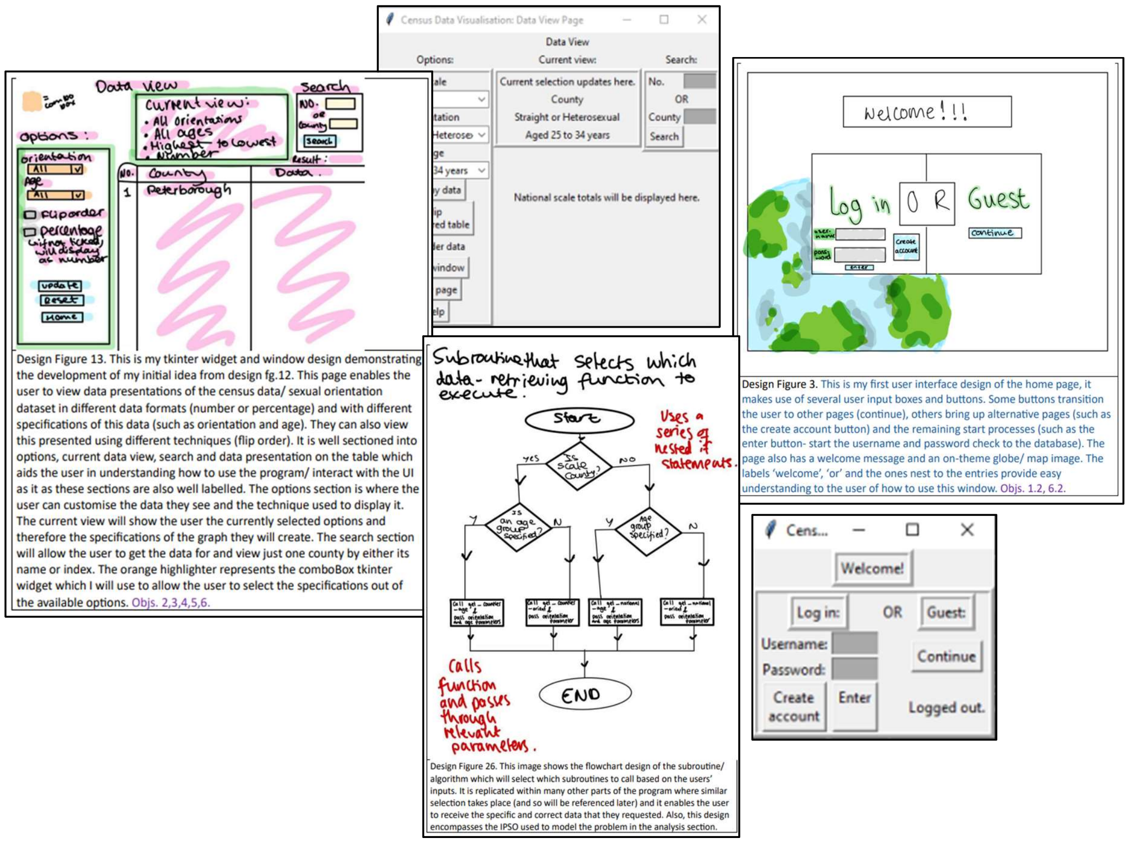

Figure 3: Census Data Presentation Program: Sexual Orientation - Courtney Pudney

I wish the entire group the very best of luck for their exams and sincerely hope that many of these students continue studying some form of Computer Science as they progress in their careers.