Rachel Kerr

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I am a highly committed and hardworking student who is determined to solve any challenges or tasks. I am open to learning and developing new skills as part of my personal development.

EDUCATION

University of Essex, **Colchester, Essex** — *BSc Computer Science*

OCTOBER 2020 - PRESENT

First year modules: Team Project (85%), Programming [Python] (96%), Object-Oriented Programming [Java] (94%), Mathematics (85%), Databases (82%), Networks (82%), Web Development (86%) and Digital Systems (92%).

First year grade: Pass with Distinction and included on the Dean's list of excellence (88%)

Second year modules: Team Project, Software Engineering, Application Programming, Data Structures and Algorithms, Artificial Intelligence, Computer Security, C++ Programming and Operating Systems.

Invicta Grammar School, **Maidstone, Kent** — *A-Levels*

SEPTEMBER 2018 - SUMMER 2020

Computer Science - B, Product Design - B, Mathematics - D

St Simon Stock Catholic School, **Maidstone, Kent** — *GCSE'S*

SEPTEMBER 2013 - SUMMER 2018

Ten GCSE'S Grades 8-5 (including Maths and English)

EXPERIENCE

Firemind, **Maidstone, Kent** — *Work Shadowing*

JULY 2019

Shadowed a front-end developer working on datasets.
Worked with another intern on website development with HTML, CSS, and JavaScript, making a registration form, animated cards, a loader, and an animation using keyframes.
This has given me a better understanding of what it's like to be a front- developer and the experience has improved my teamwork and web development as well as code optimisation.

TECHNICAL SKILLS

Python

I have developed various applications such as GUIs made with tkinter and created a driving simulator game that interfaces with a micro bit for the user to control their car and Panda3D for the engine. A demonstration of this can be seen on my GitHub.

Java

I have programmed using different kinds of data structures & algorithms and a basic AI to go against a user in a 5x5 grid of tic-tac-toe. Collaborated with a team to develop a COVID-19 modelling and forecast program which takes data from CSV files and is converted to be read and visualised easily using an interactable GUI with a dynamic graph and buttons. The forecast is predicted using linear regression.

C++

I learned to program in this language this year and have coded a hangman game for an assignment.

TECHNOLOGIES

Microsoft Office Suite

Jira

Python

Java

C++

HTML5

CSS

JavaScript

SQL

Cisco Packet Tracer

Unix

Teamwork and Communication

In the first year of university during the COVID-19 pandemic, I had to undergo a team project communicating online using Zoom and organising work through JIRA. During this I learned to lead and communicate within a team in order to balance out tasks and get the work done efficiently. This has improved my skill in people management as well as being more vocal.

Problem solving

Whilst programming I have come across many bugs in my code that I have fixed by methodically breaking down each part of the code to recognise what the issue was and troubleshooting to find a more efficient way to solve it.

I also spend time working on my cyber security skills working on various challenges such as capture the flags. This has improved my critical thinking to solve challenging puzzles involving steganography and cryptography.

Time management

I manage my time effectively by having a schedule that allows me to keep track of all activities I do in a day such as work, gym, cooking food, social activities, gaming and getting a healthy amount of sleep.

Adaptability

Going from living with parents to being independent has given me the ability to adapt into a different environment and take responsibility in doing daily tasks.

Cisco Certified Network Associate 1 (91%)

I have completed this networking course and achieved 91% in the final exam. This has introduced me to using packet tracer and has taught me how to configure networks, routers, and switches.

Cyber Security

During sixth form I was introduced to the cyber discovery programme providing me with resources to learn about security concepts which engaged my interest and tested my computational thinking. I worked through various challenges on cyberstart assess and game which has expanded my knowledge in various areas of cyber security such as web exploitation, cryptography, forensics, etc. From the challenges, I understand that in real-life scenarios these methods are combined to make decoding problems challenging when hackers try to exploit vulnerabilities. In my spare time, I practice CTF's through platforms such as picoCTF to further improve my skills and challenge myself while solving these problems.

Computer Science and Electronic Engineering Society

In my second year at university, I became an executive of the CSEE society as the role of COVID Officer where I ensure members follow guidelines at events and carry out any risk assessment and operating procedures needed to make sure all members are safe. In late January 2022 we planned a Hackathon for society members to create a game.

Football & Gym

I play for my universities second team in woman's football which has improved my teamwork and communication skills as well as keeping me fit and healthy. I also go the gym on a regular basis to build physical strength and develop a positive mindset for my mental health.

Gaming

I play competitive multiplayer games for entertainment which helps me with my communication skills. I am also an active member of my university's gaming society and have worked together with other volunteers to create a website for them.

*References: Available on request