# **Higher Nationals**

# **Assignment Brief – BTEC (RQF)**

**Higher National Diploma in Computing**

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| **Student Name /ID Number** | Aaron Mascarenhas |
| **Unit Number and Title** | **Unit 27 – Artificial Intelligence** |
| **Academic Year** | **19/20** |
| **Unit Assessor** | **Gurjeet Singh Kohli** |
| **Assignment Title** | **Secret Intelligence Service MI6 - Criminal Detection System** |
| **Issue Date** |  |
| **IV Name** | **Nital Patel** |
| **Final submission date** | **29.10.2019** |
| **Re-submission date (if required)** |  |

**Plagiarism**

Plagiarism is a particular form of cheating. Plagiarism must be avoided at all costs and students who break the rules, however innocently, may be penalised. It is your responsibility to ensure that you understand correct referencing practices. As a university level student, you are expected to use appropriate references throughout and keep carefully detailed notes of all your sources of materials for material you have used in your work, including any material downloaded from the Internet. Please consult the relevant unit lecturer or your course tutor if you need any further advice.

**Student Declaration**

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| **Student declaration**  I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.  Student signature: Aaron Date: 08/11/19 |

**Learning Outcomes and Assessment Criteria**

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|  | Grading Criteria | Met | Grading Criteria | Met | Grading Criteria | Met |
| **LO1** | P1 |  | M1 |  | D1 |  |
|  | P2 |  |  |  |  |  |

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| **Assessor Feedback:**  \*Please note that constructive and useful feedback should allow students to understand:   1. Strengths of performance 2. Limitations of performance 3. Any improvements needed in future assessments   Feedback should be against the learning outcomes and assessment criteria to help students understand how these inform the process of judging the overall grade.  Feedback should give full guidance to the students on how they have met the learning outcomes and assessment criteria. | | | | |
| **Grade:** | **Assessor Signature:** | | | **Date:** |
| **Resubmission Feedback:** | | | | |
| **Grade:** | | **Assessor Signature:** | **Date:** | |

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| Submission Format: |
| 1. The submission is in the form of an individual written report. This should be written in a concise, formal business style using single spacing and font size 12. 2. You are required to make use of headings, paragraphs and subsections as appropriate, and all work must be supported with research and referenced using the Harvard referencing system. 3. Please also provide a bibliography using the Harvard referencing system. The recommended word limit is 1,500–2,500 words, although you will not be penalised for exceeding the total word limit. |
| Unit Learning Outcomes: |
| LO1 Analyse the theoretical foundation of artificial intelligence, current trends and issues to determine the effectiveness of Artificial Intelligence technology |
| Assignment Brief and Guidance: |
| Image result for mi6 logo  **Case Study – Security Service MI6**  You are working within the London Metropolitan Police Service as a part of their Crime prevention unit. As more and more crime is occurring on London/UK streets the London Met has created a joint Intelligence unit with MI6. The Met Police did not have the current funding to develop an Artificial Intelligence Criminal Face Detection application. You have been deployed within a Special AI Crime Prevention task force to develop an AI model which detects Criminals in real time video feeds.  Central London is a hub where a lot of Criminal Activity takes place based on the Metropolitan Police. Central London has an approximate 500.000 CCTV camera deployed onto Londoners 24/7. The Intelligence Service recommends that an AI application could be injected within the CCTV feed and the AI could detect Criminals and pin point on London Map by sending the GPS locations to the nearest Police patrolling the area. Below are the number of CCTV cameras deployed on London’s Top 10 Underground Stations.   |  |  | | --- | --- | | **Underground Stations** | **No. of CCTV cameras** | | **Oxford Circus** | 309 | | **Waterloo** | 303 | | **Green Park** | 210 | | **Elephant & Castle** | 190 | | **Bank/Monument** | 182 | | **Westminster** | 177 | | **Piccadilly Circus** | 175 | | **Wembley Park** | 171 | | **Canary Wharf** | 167 |   **Secret Service MI6 - Background**  The Secret Intelligence Service (SIS), commonly known as MI6, is the [foreign intelligence service](https://en.wikipedia.org/wiki/Intelligence_agency) of the [government](https://en.wikipedia.org/wiki/Government_of_the_United_Kingdom) of the [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), tasked mainly with the covert overseas collection and analysis of [human intelligence](https://en.wikipedia.org/wiki/Human_intelligence_(intelligence_collection)) (**HUMINT**) in support of the UK's national security. SIS is a member of [the country's intelligence community](https://en.wikipedia.org/wiki/British_intelligence_agencies) and its [Chief](https://en.wikipedia.org/wiki/Chief_of_the_Secret_Intelligence_Service) is accountable to the country's [Foreign Secretary](https://en.wikipedia.org/wiki/Secretary_of_State_for_Foreign_and_Commonwealth_Affairs).  Formed in 1909 as a section of the [Secret Service Bureau](https://en.wikipedia.org/wiki/British_Secret_Service_Bureau) specialising in [foreign intelligence](https://en.wikipedia.org/wiki/Foreign_intelligence), the section experienced dramatic growth during [World War I](https://en.wikipedia.org/wiki/World_War_I) and officially adopted its current name around 1920. The name MI6 (meaning [Military Intelligence, Section 6](https://en.wikipedia.org/wiki/MI_numbers)) originated as a flag of convenience during [World War II](https://en.wikipedia.org/wiki/World_War_II), when SIS was known by many names.  It is still commonly used today. The existence of SIS was not officially acknowledged until 1994. That year the [Intelligence Services Act 1994](https://en.wikipedia.org/wiki/Intelligence_Services_Act_1994) (ISA) was introduced to Parliament, to place the organisation on a statutory footing for the first time. It provides the legal basis for its operations. Today, SIS is subject to public oversight by the [Investigatory Powers Tribunal](https://en.wikipedia.org/wiki/Investigatory_Powers_Tribunal) and the [Parliamentary Intelligence and Security Committee](https://en.wikipedia.org/wiki/Intelligence_and_Security_Committee_of_Parliament).  The stated priority roles of SIS are [counter-terrorism](https://en.wikipedia.org/wiki/Counter-terrorism), [counter-proliferation](https://en.wikipedia.org/wiki/Counter-proliferation), providing intelligence in support of [cyber security](https://en.wikipedia.org/wiki/Cyber_security), and supporting stability overseas to disrupt terrorism and other criminal activities. Unlike its main sister agencies, the [Security Service](https://en.wikipedia.org/wiki/MI5) (MI5) and [Government Communications Headquarters](https://en.wikipedia.org/wiki/Government_Communications_Headquarters) (GCHQ), SIS works exclusively in foreign intelligence gathering; the ISA allows it to carry out operations only against persons outside the [British Islands](https://en.wikipedia.org/wiki/British_Islands). Some of SIS's actions since the 2000s have attracted significant controversy, such as its alleged acts of [torture](https://en.wikipedia.org/wiki/Enhanced_interrogation_techniques) and [extraordinary rendition](https://en.wikipedia.org/wiki/Extraordinary_rendition). Since 1995, SIS has been headquartered in the [SIS Building](https://en.wikipedia.org/wiki/SIS_Building) in [London](https://en.wikipedia.org/wiki/London), on the [South Bank](https://en.wikipedia.org/wiki/South_Bank) of the [River Thames](https://en.wikipedia.org/wiki/River_Thames).  The statistical data provided on the next page shows the seriousness of the Knife crime problem within London and the UK as a whole.  http://researchbriefings.files.parliament.uk/documents/SN04304/assets/2151dcfe-7a58-4e89-bf33-6bd0ba6b4bc1.png  **Knife crime statistics**  Knife crime is a persistent and worrying concern, especially as it impacts particularly upon young people and the disadvantaged, and various remedies have been tried over the years. Recorded crimeIn the year ending March 2018, there were around 40,100 (selected) offences involving a knife or sharp instrument in England and Wales. This is the highest number in the eight-year series (from year ending March 2011) the earliest point for which comparable data are available. This is directly related with improvements in recording practices.  HomicideIn 2017/18 there were 268 *homicides* currently recorded using a sharp instrument, including knives and broken bottles, accounting for 33% of all homicides – an increase from the 216 recorded in 2016/17. **Knife crime by police force area**  London recorded the highest rate of 168 offences involving a knife per 100,000 population in 2017/18, an increase of 26 offences per 100,000 population from 2016/17. Surrey had the lowest rate of 5 offences per 100,000 individuals (up by 1 from 2016/17).  **Task 1**  As you are a part of the London Metropolitan Police service, it is very important that you do your initial research into separate elements of the AI options to detect criminals and potential people of interest to the Met Police and or Secret Intelligence Services. There are some elements which the Chief Intelligence officers wants you to look into and report back within a Formal structure report discussing and exploring the different elements of AI and its potential solutions within London city and potentially across major cities in the world.   * 1. Within a Report investigate the top-down & bottom-up approach of Artificial Intelligence and its development stages. As you are working with two Intelligence Service (London Metropolitan Police & Secret Intelligence Service) it’s important that you explore the concepts how building an AI Criminal detection system might differ from already existing Intelligence systems.   2. The two intelligence services are looking at past, current and potentially future developments to find if similar projects were developed in the past. Further to this report to the Chief Intelligence Officers also include how AI has changed the world in the last two decades emphasising on the ethical, social and philosophical issues of AI.   3. Evaluate within your report how Artificial Intelligence might change an individual’s lifestyle within London as the CCTV Criminal Detection system will be potentially tracking more members of the Public. Discuss further how this might impact one’s social and professional life within Central London. |

