





A GUIDE TO DATA & AI CAREER DEVELOPMENT

Looking to improve your knowledge and skills to progress further in the Data & AI field?

Unsure of the professional development options available?

Check out this handy guide that includes example courses and certifications that are available in Scotland (as of June 2020).

	Technology Skills	Courses	Certifications
 <p>Data Entry Clerk</p>	<ul style="list-style-type: none"> Database management systems: Apache Hadoop, Teradata Database User Interface Query Systems: IBM DB2, Microsoft Access, SQL Server Database reporting: Microsoft Power BI, SAP Crystal Reports Productivity software: G Suite, Microsoft 365 Languages: HTML, CSS, SQL 	<ul style="list-style-type: none"> Oracle Database – Introduction to SQL Online Learning Pitman Training – Microsoft Office Tableau Desktop I 	<ul style="list-style-type: none"> CompTIA ITF+ Microsoft Office Specialist (MOS) Tableau Desktop Certified Associate
 <p>Business Analyst</p>	<ul style="list-style-type: none"> Business intelligence software: IBM Cognos, Qlik Sense, Tableau Database reporting: Information Builders WebFOCUS; Microsoft Power BI, SAP Crystal Reports Data mining software: SAP Analytic Cloud Productivity software: G Suite, Microsoft 365 	<ul style="list-style-type: none"> APMG Agile Business Analysis Foundation and Practitioner BCS Business Analysis Foundation, Practitioner, Professional Tableau Desktop I, II, III 	<ul style="list-style-type: none"> BCS Business Analysis Expert IIBA Certificate in Business Analyst IIRE Certified Professional for Requirements Engineering Qlik Sense Business Analyst Tableau Desktop Certified Professional TDWI Certified Business Intelligence Professional
 <p>Data Analyst</p>	<ul style="list-style-type: none"> Cloud Platforms: AWS, Azure, GCP Database Management Systems: Apache Hadoop, MongoDB, Teradata Database User Interface Query Systems: Amazon Redshift, Apache Hive Datamining Software: IBM SPSS, SiSense Prism Languages: Java Python, R, SQL 	<ul style="list-style-type: none"> CodeClan – Data Analysis CodeClan – Programming with R BCS Professional Certificate in Data Analysis QA – Practical Big Data Analysis 	<ul style="list-style-type: none"> AWS Certified Data Analytics – Specialty CCA Data Analyst CCA Spark and Hadoop Developer SAS Certified Advanced Analytics Professional Tableau Desktop Certified Professional
 <p>Database Administrator</p>	<ul style="list-style-type: none"> Cloud Platforms: AWS, Azure, GCP Database management systems: Apache Hadoop, MongoDB, Teradata Database User Interface Query Systems: IBM DB2, Microsoft Access, SQL Server Database reporting: Information Builders WebFOCUS; Microsoft Power BI, SAP Crystal Reports Languages: Java, Python, R, Rust, Ruby, SQL 	<ul style="list-style-type: none"> CodeClan – Programming with R Cloudera Administrator Training Microsoft – Administering SQL Server Databases SAS SQL Essentials Tableau Server Architecture 	<ul style="list-style-type: none"> AWS Certified Database – Specialty IBM Certified Database Administrator Microsoft Certified: Azure Database Administrator Associate Oracle Database 12c Administrator Certified Professional
 <p>Data Engineer</p>	<ul style="list-style-type: none"> Cloud Platforms: AWS, Azure, GCP Development Environment Software: Apache Ant, Microsoft Visual Studio Enterprise application integration: IBM Infosphere, SAP Data Integrator Operating Systems: Linux, Oracle Solaris Languages: C++, Java, PowerShell, Python, SQL 	<ul style="list-style-type: none"> Data Engineering on Google Cloud Platform Linux Foundation – Fundamentals of Linux Microsoft – Administering a SQL Database Infrastructure QA – Querying SQL Databases Using T-SQL SAP BusinessObjects Data Integration 	<ul style="list-style-type: none"> CCP Data Engineer Google Professional Data Engineer IBM Big Data Engineer Microsoft Certified: Azure Data Engineer Associate SAS Big Data Professional
 <p>AI Engineer</p>	<ul style="list-style-type: none"> Cloud Platforms: AWS, Azure, GCP Neural Network and Deep Learning Frameworks Analytical or Scientific Software: SAS, StataCorp Stata, MathWorks MATLAB, XLISP-STAT Database Management Systems: Apache Hadoop, Apache Pig, Teradata Development Environment Software: IntelliJ IDEA, Microsoft Visual Studio Languages: Java, Julia, Haskell, MATLAB, Prolog, Python, R, Scala 	<ul style="list-style-type: none"> BCS Essential in Artificial Intelligence (AI) Google Cloud Fundamentals: Big Data and Machine Learning Microsoft AI School QA – Practical Machine Learning 	<ul style="list-style-type: none"> AWS Certified Machine Learning – Specialty IBM AI Engineering Professional Certificate Microsoft Certified: Azure AI Engineer Associate
 <p>Data Manager</p>	<ul style="list-style-type: none"> Cloud Platforms: AWS, Azure, GCP Business intelligence software: IBM Cognos, Qlik Sense, Tableau Database Management Systems: Apache Hadoop, Oracle PL/SQL, Teradata Database reporting: Information Builders WebFOCUS; Microsoft Power BI, SAP Crystal Reports Languages: Python, R, SQL 	<ul style="list-style-type: none"> The Data Lab – Driving Value from Data MOOC CodeClan – Managing Growth with Agile ODI – Strategic Data Skills SAS SQL Essentials Tableau Desktop I, II, III 	<ul style="list-style-type: none"> CBIP – Certified Business Intelligence Professional CDMP – Certified Data Management Professional IBM Certified Specialist, Data Manager SAS Big Data Professional TDWI Certified Business Intelligence Professional
 <p>Data Scientist</p>	<ul style="list-style-type: none"> Analytical / Scientific software: SAS, StataCorp Stata, MathWorks MATLAB, XLISP-STAT Database management systems: Apache Hadoop, Apache Pig, Teradata Database User Interface Query Systems: IBM DB2, Microsoft Access, SQL Server Datamining software – Angoss KnowledgeSEEKER, SAS Enterprise Miner Languages: Java, Julia, MATLAB, Python, R, Scala, SQL 	<ul style="list-style-type: none"> Cloudera Data Scientist DataCamp Data Scientist General Assembly Data Science Hortonworks Data Platform (HDP): Data Science QA – Practical Data Science with Python 	<ul style="list-style-type: none"> Certified MATLAB Professional IBM Data Science Professional Microsoft Certified: Azure Data Scientist Associate Qlik Sense Data Architect Certification SAS Certified Data Scientist
 <p>Data Architect</p>	<ul style="list-style-type: none"> Cloud Platforms: AWS, Azure, GCP Database Management Systems: Apache Hadoop, MongoDB, Teradata Development Environment Software: IntelliJ IDEA, Microsoft Visual Studio Metadata management software: IBM Rational System Architect, Talend Data Fabric Languages: C++, Java, Python, R, Ruby, SQL 	<ul style="list-style-type: none"> The Data Lab – Driving Value from Data MOOC MongoDB – Diagnostics and Debugging QA – Python Programming Tableau Server Architecture 	<ul style="list-style-type: none"> AWS Solutions Architect Professional IBM Certified Data Architect Microsoft Certified: Azure Solutions Architect Expert SAS Certified Advanced Analytics Professional TOGAF 9
 <p>Chief Data Officer</p>	<ul style="list-style-type: none"> Cloud Platforms: AWS, Azure, GCP Business intelligence software: IBM Cognos, Qlik Sense, Tableau Database management systems: Apache Hadoop, MongoDB, Teradata Database User Interface Query Systems: IBM DB2, SQL Server Languages: Java, Python, R, Rust, Ruby, SQL 	<ul style="list-style-type: none"> The Data Lab – Driving Value from Data MOOC edX – Data Ethics, AI, and Responsible Innovation edX – Enterprise Data Management ODI – Open Data in Practice ODI – Strategic Data Skills 	<ul style="list-style-type: none"> CDMP – Certified Data Management Professional Certified Information Privacy Manager (CIPM) Data Governance and Stewardship Professional (DGSP) SAP Certified Application Associate – SAP Master Data Governance TOGAF 9



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