

Dr. Ghodrat Moghadampour
Vaasa University of Applied Sciences
Vaasa, Finland
mg@vamk.fi

Data Analytics Tools

Data analytics is the process of studying raw data to extract insights, identify trends, and make knowledgeable choices. It involves using various techniques and tools to analyze large and complex datasets to extract insights that can be used to solve various problems, improve processes, and drive innovation. Key aspects of data analytics are 1) data collection, which is gathering data from various sources, 2) data cleaning and preparation, which ensures the data is accurate, complete, and ready for analysis, 3) data analysis by applying appropriate techniques to analyze the data and extract sensible information, 4) interpretation and visualization, which means presenting the findings in a clear and comprehensible way, and 5) sharing insights through communicating the findings to stakeholders to advise decision-making and drive action. There are many types of data analytics tools for different purposes. Examples of data analytics tools are SQL databases for data collection and storage, OpenRefine for data cleaning and preparation, Python with libraries like pandas for data analysis and modeling, Power BI for business intelligence, Apache Spark for big data and real-time analytics and Grafana for data visualization.