

**D04 – List of development and collaboration tools**

We designed our complete Business Intelligence system based on three core products, Microsoft SQL Server, Google Colab and Microsoft Power BI.

Microsoft SQL Server is a relational database management system developed by Microsoft. As a database server, it is a software product with the primary function of storing and retrieving data as requested by other software applications. We utilized MSSQL in order to build SQL querries/scripts (by utilizing the SQL programming language) and construct our staging, data ware house and data marts databases.

We utilized Google Colab to create and share among team members Python notebooks. Google provides cloud resources to execute the code and the notebook gives the ability to execute code in blocks/cells as well as add text cells to describe the code. Python is a high-level object oriented programming language with a complete library of Machine Learning models, such as scikit-learn that makes programming code writing very easy to write and read.

PowerBI is a visualization tool offered by Microsoft that allows the source of data from different sources (database, csv and others) in order to provide live dashboards, analytics and reporting to business users and give the ability to querry a database.

|  |  |
| --- | --- |
| TOOL | USAGE |
| MSSQL | Communication with the Database through SQL language |
| Google Colab | Writing and sharing Python notebooks for ML analysis |
| Jupyter Notebook | Offline code development for ML analysis |
| Microsoft PowerBI | Visualization tool for live dashboards, analytics and reporting |
| Microsoft Teams | Communicating with team (video/audio calls, chat) , uploading and sharing content/project work, communicating with professors |
| Google Drive | Storage for ML/Python tasks and code sharing |
| Github | Upload the entire project on Github for peer reviewing / sharing our work |
| Google Slides | Creating shared presentation to define features extracted and cooperate in defining desired transformations |
| MS Office | Task management tool in excel, shared attribute selection for DW in excel, written deliverables in doc format, OneNote for meeting and individual notes |
| Whatsapp | Instant communication with team |
| Draw.io/app.diagrams.net | Diagram Creation for the overall BI system and DW |
| freelogodesign.org | Design of StayMore logo |