# TTS Data Lab

Research Technology datalab.tufts.edu Last updated: Yi Zhao 10/12/2022

#### **Data Science Notebooks**

|  | NOTEBOOK               | DESCRIPTION   | LANGUAGE<br>SUPPORTED  | SYNCHRONOUS<br>Editing <sup>1</sup> | CLOUD OR<br>Local | PRICING   |
|--|------------------------|---|--|-------------------------------------|-------------------|---|
|  | <u>Deepnote</u>        | Deepnote is a new kind of data notebook that's built for collaboration — Jupyter compatible, works magically in the cloud, and sharing is as easy as sending a link.  | R, Python, Julia   | Yes                                 | Cloud             | Standard and Pro<br>versions are free<br>for students and<br>teachers |
|  | <u>JupyterLab</u>      | JupyterLab allows users to configure and arrange workflows in data science, scientific computing, computational journalism, and machine learning. A modular design invites extensions to expand and enrich functionality. | R, Python, Julia,<br>and more                                  | Yes²                                | Both              | Free  |
|  | <u>Google Colab</u>    | Colab allows to write and execute arbitrary python code through the browser, and is especially well suited to machine learning, data analysis and education.  | Python   | No                                  | Cloud             | Free  |
|  | <u>Apache Zeppelin</u> | Web-based notebook that enables data-driven, interactive data analytics and collaborative documents. Great for big data analysis.   | Python, SQL, R,<br>Shell, Apache<br>Spark, and<br>Apache Flink | Yes                                 | Both              | Free  |

<sup>&</sup>lt;sup>1</sup>Allow real-time collaborative editing.

<sup>&</sup>lt;sup>2</sup>Collaboration feature is experimental, regular backups are recommended. Not all editors are sync.

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|--|-------------------|---|-------------------------------|-------------------------------------|-------------------|--|
|  | <u>SageMath</u>   | SageMath is a free open-source mathematics software system. It builds on top of many existing open-source packages: NumPy, SciPy, matplotlib, Sympy, Maxima, GAP, FLINT, R and many more. | Python                        | No                                  | Local             | Free                                       |
|  | <u>CoCalc</u>     | CoCalc is a virtual online workspace for collaboratively performing calculations when carrying out research, teaching, or authoring/publishing documents.                                 | R, Python, Julia,<br>and more | Yes                                 | Cloud             | Depend on<br>license chosen                |
|  | <u>Observable</u> | Observable is a platform where you can collaboratively explore, analyze, visualize, and communicate with data on the web. (Strong in visualization)                                       | JavaScript <sup>2</sup>       | Yes                                 | Cloud             | Free for limited<br>users and<br>functions |
|  | <u>Mode</u>       | Mode is a data science<br>platform that brings together a<br>SQL editor, Python notebook,<br>and R  | Python, SQL, R                | No                                  | Local             | Free for limited<br>users and<br>functions |

<sup>&</sup>lt;sup>1</sup>Allow real-time collaborative editing

<sup>&</sup>lt;sup>2</sup>Learning materials available for other coding language users

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|--|---------------------------|--|--|-------------------------------------|-------------------|--|
|  | <u>JetBrains Datalore</u> | A powerful environment for Jupyter notebooks. Use smart coding assistance for Python, SQL, R and Scala in Jupyter notebooks, run code on powerful CPUs and GPUs, collaborate with your team, and easily share the results.           | Python, SQL, R<br>and Scala                  | Yes                                 | Cloud             | Free for limited<br>users and<br>functions |
|  | Notebooks in<br>VSCode    | Visual Studio Code supports<br>working with Jupyter<br>Notebooks natively, and<br>through Python code files.   | Python, R, Julia,<br>JavaScript, and<br>more | Yes²                                | Both              | Free                                       |
|  | <u>Nextjournal</u>        | Runs anything you can put into a Docker container. Improve your workflow with polyglot notebooks, automatic versioning and real-time collaboration.  | Python, R, Julia,<br>and more                | Yes                                 | Cloud             | Free for limited<br>users and<br>functions |
|  | ArcGIS Notebooks          | ArcGIS Notebooks provide a versatile web-based interface for powerful geospatial data analysis. ArcGIS Notebooks provide an integrated platform to create, share, and run data science, data management, and administrative scripts. | Python                                       | No                                  | Cloud             | Free for Tufts<br>affiliates               |

<sup>&</sup>lt;sup>1</sup>Allow real-time collaborative editing

<sup>&</sup>lt;sup>2</sup>Live Share Extension Pack available at https://marketplace.visualstudio.com/items?itemName=MS-vsliveshare.vsliveshare-pack