The end-to-end platform for easy, fast development and deployment of ML models from spectral data

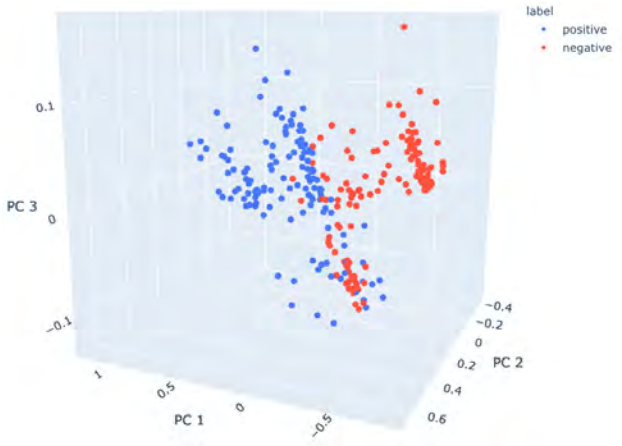
SpecAI

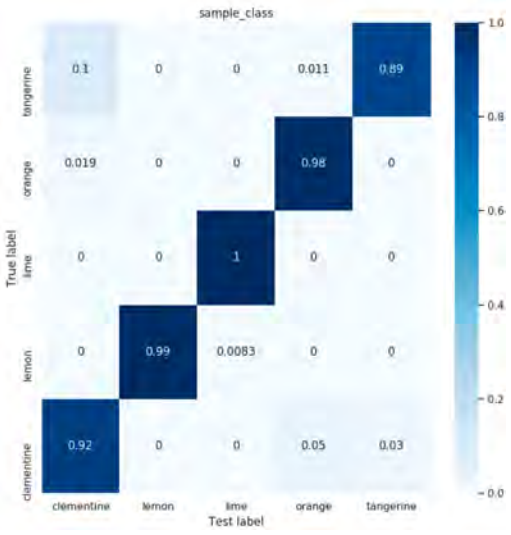
What is SpecAI?

SpecAI is an AI platform where researchers can collaborate for synchronizing, visualizing and analyzing spectral data as well as easily develop and validate models with state-of-the-art ML algorithms, running in the cloud.

With SpecAI, both the spectral data correlated to the reference lab results and the ML models are safely stored in our cloud servers and can be easily accessed by any registered co-worker through a dedicated website, anytime and anywhere.

Trained models can then be used in your apps thanks to our API without any limitations or additional costs.





How does it work?

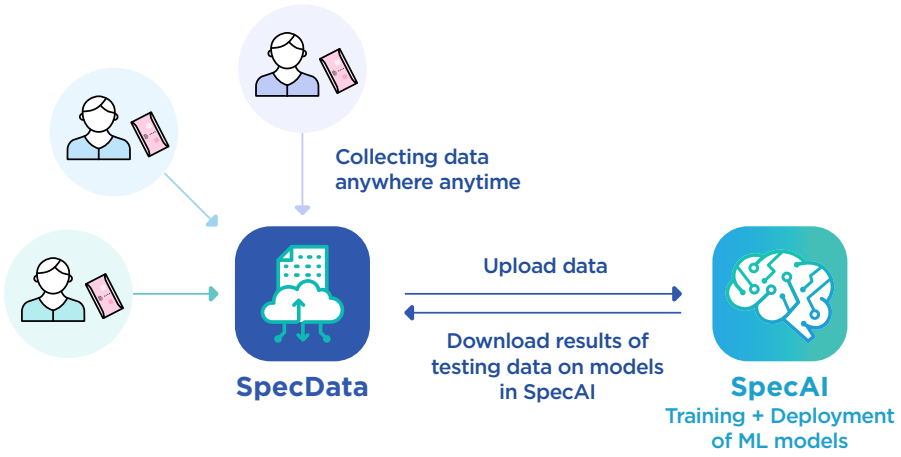
SpecAI was developed with a user-friendly interface, to allow fast and easy development of ML models from spectral data collected by any spectrometer, including Tellspec's sensors, the Enterprise and Preemie; the platform is spectrometer agnostic. SpecAI can upload spectral data collected in the field via SpecData, a dedicated mobile application connected to our spectrometers, or by uploading a CSV file.

Running on your preferred browser, it can be used both with Windows or MacOS. The software automatically synchronises with the cloud server to ensure data is stored in a secure and consistent way across all users, and that data collected anywhere is accessible to administrators and data scientists. Administrators can manage users, set-up protocols for data collection, check the data collection process, as well as publish calibration models to sensors in remote locations on the network.

How do SpecAI and SpecData integrate with each other?

SpecData is a mobile application that allows the collection of spectral data which later will be used in the development of calibration models.

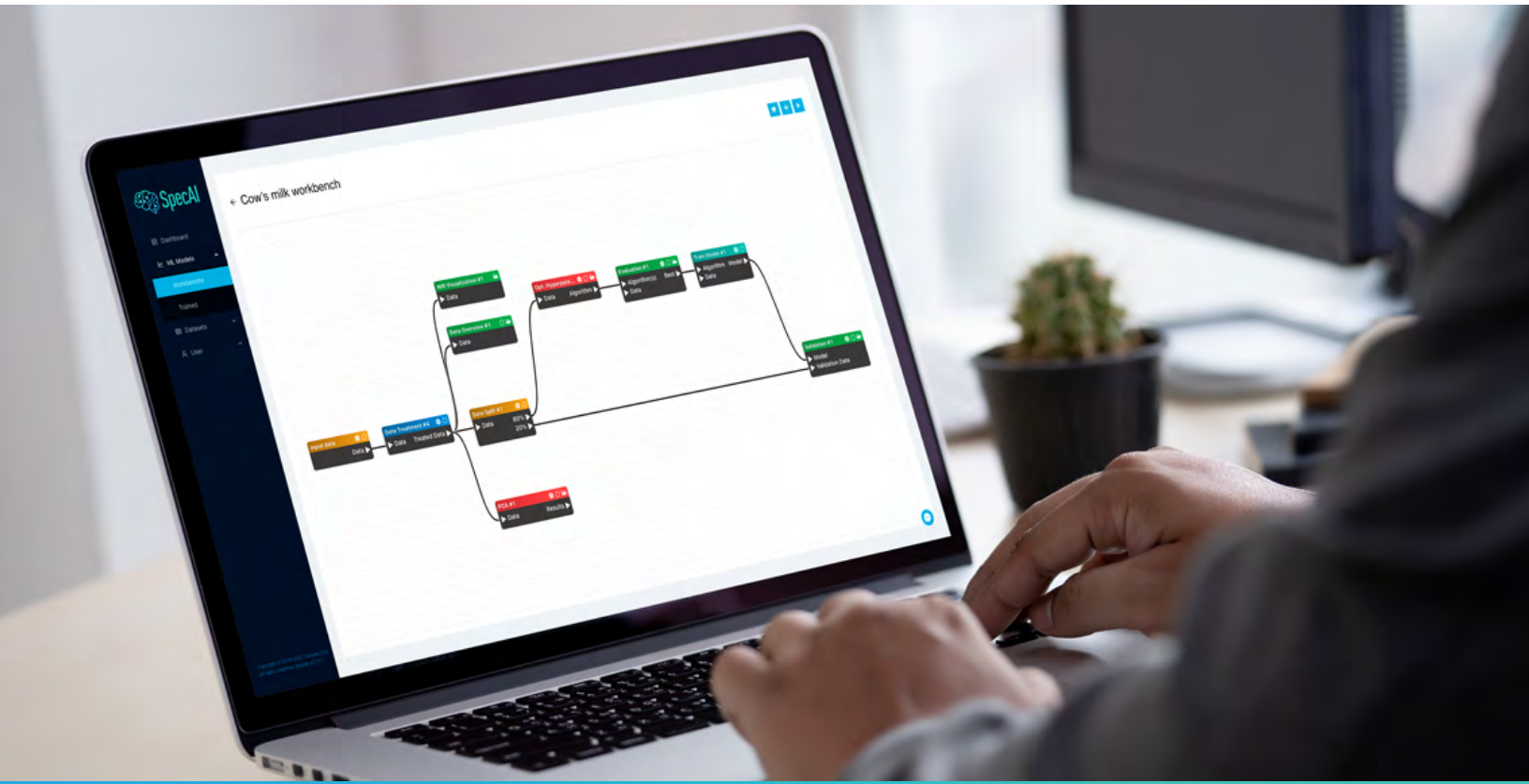
SpecData software has two components: the desktop application, which is used by a supervisor to set-up users access and track the data collection process, and the mobile application, that is used by a team and allows the collection of spectral data along with label data from laboratory analysis. The data collected using SpecData is stored in our cloud and can be easily accessed by SpecAI for training and deploying the ML models.



Your data playground

By using an intuitive drag and drop system, you can select widgets and the connections between them to quickly perform data treatments, visualize data, build ML models, perform cross-validation, and send it to the next widget for further processing.

In a few clicks, the user can start a model training by using an extensive library of ML algorithms. In case of complex model building, the user can leverage an increased cloud computational load to get it faster. Furthermore, when the model training is running in the back-end, the user can continue using the application or even close it and return later on to check the training progress. SpecAI is prepared for all data procedures, including managing imbalanced data and filter outliers.



Our unique advantages

SECURITY

Store collected data on a secure company-wide cloud database, register users and manage their access.

COLLABORATION

Multiple users can work on the same dataset simultaneously from anywhere, and share in real time data and models.

EXTENSIVE DATA VISUALIZATION

Visualize and explore data, such as outliers, variable distributions or data clusters without having to download it to a local computer.

COMPREHENSIVE DATA PRETREATMENTS

Access in an intuitive way a comprehensive set of data pretreatments commonly used in chemometrics.

EASY AND FAST ML MODEL BUILDING

Access to a growing library of ML algorithms and choose from regression or categorical model types as well as performing hyperparameter optimizations with several algorithms at the same time.

POWERFUL EXPERIMENTATION

Flexible architecture that helps you experiment, build, train and deploy state-of-the-art ML models.

SENSOR AGNOSTIC

Upload data from any spectrometer or by using SpecData mobile app with either the Tellspec's Enterprise sensor or Preemie sensor.

SCALABILITY

Effortlessly increase your computational power by adding servers to your cloud architecture.

DIVERSIFICATION

Export the results in a variety of formats, like csv, json, xlsx, or pdf, and get results from a variety of processes.

TECHNICAL SPECIFICATIONS

Server hosted at AWS. Web browsers supported: Google Chrome, Mozilla Firefox, Microsoft Edge, Opera and Safari.
Windows and MacOS compatible

WE ALSO OFFER A RANGE OF CONSULTING AND SOFTWARE SOLUTIONS TO HELP YOU INNOVATE FASTER.

For more information, please contact us at +44 07312396041
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