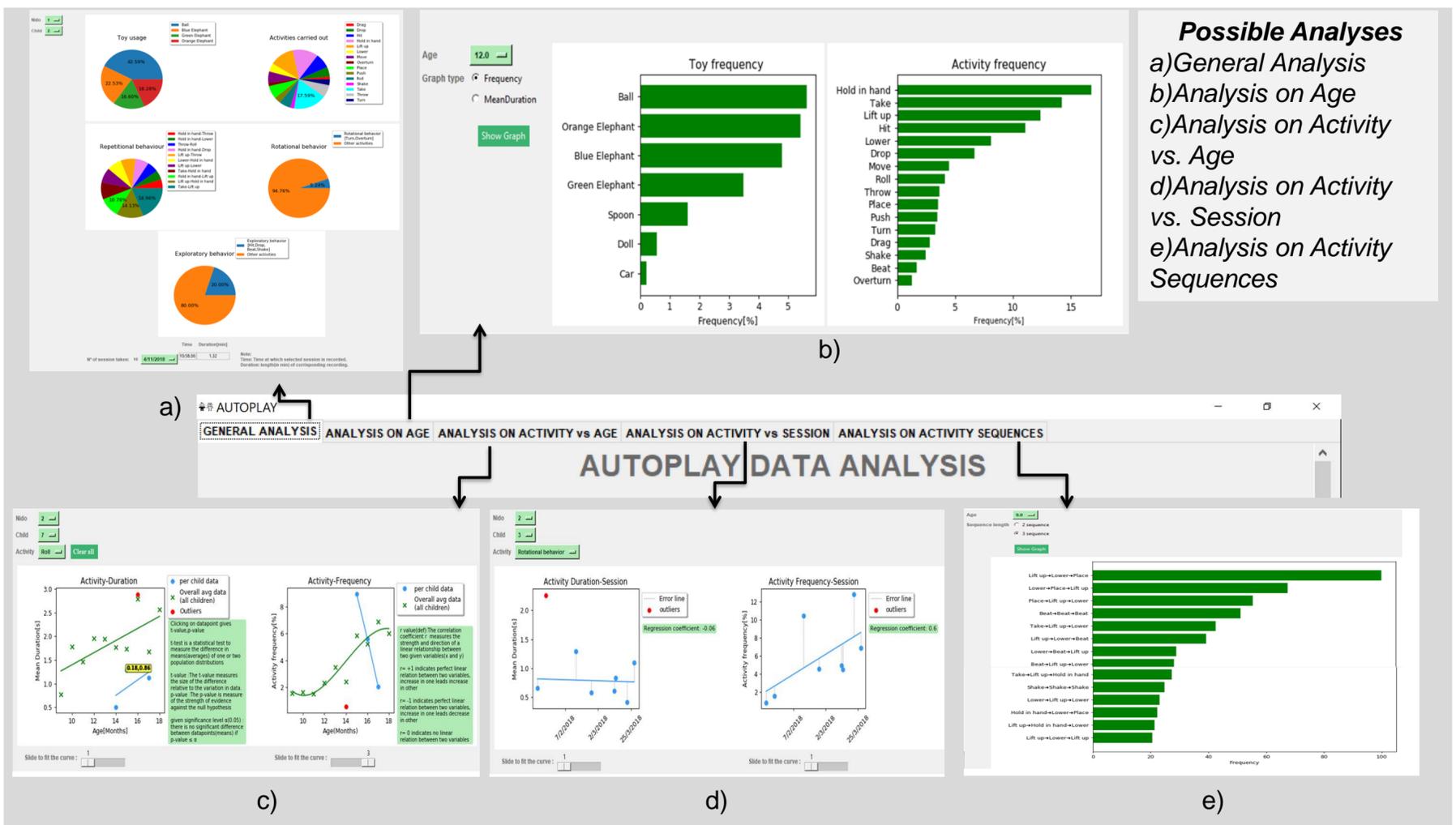


SUPSI

# Playing by Data Analytics

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Course	N° project	year	Date
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## Abstract

Data analysis can be powerful in discovering patterns in large data sets using statistics, machine learning and data mining techniques. On a raw database, full of tables and full of data, useful information can be quite difficult to be extracted. If data is elaborated, summarized and graphically represented, it can be far easier to interpret the results. And from a clinical perspective, new information can be discovered. In this project data analysis is carried out on the AutoPlay project database. It contains information about ludic activities of children (9-15 months) from two kindergartens. The AutoPlay project, initiated by a collaboration of two SUPSI Department (DEASS and DTI), aims at anticipating the diagnosis of autism spectrum disorders, neuro developmental disorders and social fragilities.

## Objective

The purpose of the present project is to acquire knowledge of Data Analytics and bringing it into action. To reorganize the data in different data frame, extract important feature, check for differences in sub groups and thus making data stream visualization and analysis possible in a user-friendly manner. We aim at facilitating, through a user interface, the translation of the available data into clinical and social information.

## Conclusion

A tool that shows what a data scientist can do to the clinical experts is now available. This implementation could be a base for further developments. Thanks to an easier collaboration with the clinician it will then be possible to build up a better way of defining the ludic behavior of children. Presently the results of the data analysis are not significant, due to the data quantity. Future AutoPlay phases will collect data from a larger number of children and from children at a high risk for ASD.