

2020 Nontraditional Data & Statistical Learning with Applications to Macroeconomics

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Fostering a Data Driven organization



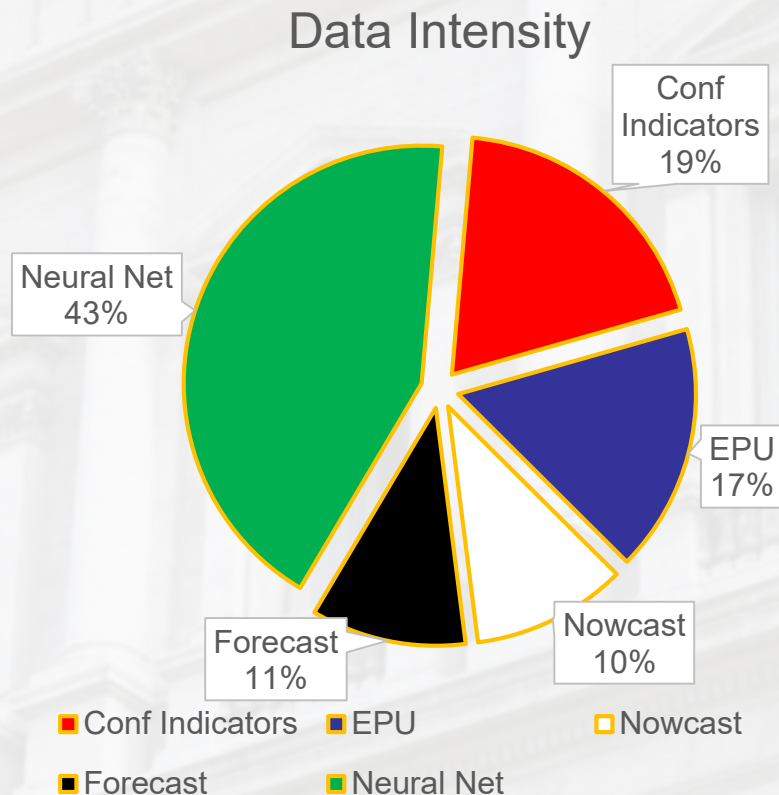
- Starting the path from organizational silos to a Data driven institutions;
- Optimizing the trade-off between data security and true data analytics;
- out there a rich web could provide us with useful insights;
- Grappling with huge datasets is spurring the developments of new HW & SW platforms;
- Mixing different skills is the sole viable path to achieve more efficient statistics;

Nontraditional sources

- a) Twitter (other blogging platforms in perspective),
- b) Dow Jones Factiva: global news and articles available through a search engine,
- c) Immobiliare.it online real estate agency,
- d) Mutuonline: banks' mortgage comparison and brokering > 30 banks,
- e) Granular payments data for credit/debit cards,
- f) Textual data from BI official publications;

Artificial Intelligence & Machine Learning

- Confidence Indicators towards the Banking system;
- Economic policy Uncertainty;
- Nowcasting and forecasting for inflation, household consumption, Industrial Consumption,
- Digital image classification with ANN



Artificial Intelligence & Machine Learning

Bank of Italy perspectives

- CB & banks will strengthen their data management processes to ensure that the right amounts of relevant data are collected, available, and exploitable.
- Valuable insights will be drawn from information that originates outside the single organization from governments, trade organizations, industry utilities, and cross industry coalitions sharing information.
- Data should be *democratized*, giving open and secure access to all those entitled to draw on it.
- Cooperation among central institutions and private sector is the required soil fertilization to improve policy action.

The next steps

- Thorough experimentation of the latest frameworks for Natural Language Processing for micro- and macro-economics applications;
- Sharpening the accuracy of econometric forecasts employing Ensemble methodologies and Artificial Neural Networks;
- Evaluation and comparative analysis of statistical indicators achieved by harnessing web data, credit/debit card microdata and mobile phone data.