

<u>Group composition</u>	<u>Emails</u>
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## SCOPING NOTE

<b>Main recipient</b>	M. SARR ( <i>professor</i> )
<b>Project definition</b>	Study & Implementation of a ML/DL-based crypto trading strategy
<b>Main tasks</b>	<ul style="list-style-type: none"> <li>- Theoretical study of the crypto-currencies ecosystem</li> <li>- Pre-processing of the given datasets</li> <li>- In-depth state-of-the-art over ML/DL trading strategies</li> <li>- Application on BTC-USD special case</li> <li>- Use of transfer learning for other crypto pairs</li> </ul>
<b>Context</b>	Academic research project
<b>Constraints</b>	<ul style="list-style-type: none"> <li>- <b>Beginning of the internships implying reduced schedules</b></li> <li>- Use of the given dataset</li> <li>- Skill development on crypto knowledge + algo. trading</li> </ul>
<b>List of expected deliverables</b>	<ul style="list-style-type: none"> <li>- Final report (PDF file)</li> <li>- Final code (set of Jupyter notebooks &amp; Python scripts) (available within the GitHub repository)</li> <li>- Scoping note (PDF file) &amp; Gantt chart for initial organization plan (PDF file)</li> <li>- Final oral presentation, including slides (PDF file)</li> </ul>
<b>Schedule</b>	<ul style="list-style-type: none"> <li>- March 21: Subject presentation</li> <li>- March 24: First meeting &amp; Data pre-processing</li> <li>- March 25: Implementation of first ML classifiers + First trading strategy</li> <li>- March 28: State-of-the-art on more robust strategies</li> <li>- March 30: Implementation of LSTM NN-based model</li> <li>- April 6: Implementation of several strategies and Adding new financial indicators</li> <li>- Study of transfer learning</li> <li>- Study of backtesting</li> </ul>
<b>Team</b>	<ul style="list-style-type: none"> <li>- Arian NAJAFY ABRANDABADY</li> <li>- Lucas RODRIGUEZ</li> <li>- Bastien TRIDON</li> </ul>
<b>Conclusion on the feasibility of the project</b>	- According to the given deadline, the project can be accurately finished right on time, and
<b>Deadline</b>	Mid-April (No precise date) for final presentation
<b>Meetings</b>	Online meeting every two nights
<b>External sources</b>	<ul style="list-style-type: none"> <li>- Binance Historical data</li> <li>- Computation of moving average &amp; other composite index to aggregate our dataset</li> </ul>
<b>Potential risks</b>	- Dealing with too complicated additional data sources (Adding up new NaN due to different frequencies, ...)