Apache Flink

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Our research is based on Apache Flink. It is a framework and distributed processing engine for stateful computations over unbounded and bounded data streams. Flink has been designed to run in all common cluster environments, perform computations at in-memory speed and at any scale. Our Goal is to study its functionality and how does it standout from spark. There many companies either making a shift or using their own business logic with flink to make most of it.

The Research Currently includes topics

* What is Apache flink?
* What are its Uses Cases?
* How is it use in Event Driven, data analytics and data pipeline applications?
* Companies currently using this technology.
* How stateful events & stream Processing works?
* Provisions and the flink process flow.

The Machine Learning and data Analytics demand has been a boom in this era, hence we would conduct a research more about the flink that makes it different and better than the other available technologies. Furthermore, would like to implement real time data analytics using flink and compare its runtime and Performance with other technologies such as Scala.

## Reference Papers

* Carbone, Paris, et al. "State management in Apache Flink®: consistent stateful distributed stream processing." *Proceedings of the VLDB Endowment* 10.12 (2017): 1718-1729.
* Dinsmore, Thomas W. "Streaming analytics." *Disruptive analytics*. Apress, Berkeley, CA, 2016. 117-144.
* Carbone, Paris, et al. "Apache flink: Stream and batch processing in a single engine." *Bulletin of the IEEE Computer Society Technical Committee on Data Engineering* 36.4 (2015).
* S. A. Noghabi, K. Paramasivam, Y. Pan, N. Ramesh, J. Bringhurst, I. Gupta, and R. H. Campbell, “Samza: stateful scalable stream processing at LinkedIn,” Proc. VLDB Endow., vol. 10, no. 12, pp. 1634–1645, 2017.

## Reference Links

* Apache Flink ([Link](https://flink.apache.org/))
* Git hub of flink ([Link](https://github.com/apache/flink))
* Alibaba Blink ([Link](https://www.ververica.com/blog/blink-flink-alibaba-search))