Research notes

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Areas where they apply ML

* voyage optimization and economics
* sustainability of transportation
* controlling of freight rates
* maintenance forecasting
* digitalization on bridge and engine control room,

“So far, the data acquisition on maritime transportation is quite limited. Therefore, adaptation of machine learning techniques in the maritime transportation is narrow as compared to other industries.”

<https://www.investopedia.com/terms/l/law-of-supply-demand.asp>

### What Is the Law of Supply and Demand?

The law of supply and demand is a theory that explains the interaction between the sellers of a resource and the buyers for that resource. The theory defines what effect the relationship between the availability of a particular product and the desire (or demand) for that product has on its price. Generally, [low supply and high demand](https://www.investopedia.com/video/play/law-supply-and-demand/) increase price and vice versa. Perfect examples of supply and demand in action include [PayPal](https://www.investopedia.com/paypal-shares-tell-a-story-of-big-demand-4692631).

Factors affecting supply.

* Production capacity
* [production costs](https://www.investopedia.com/terms/p/production-cost.asp)
  + such as labor and materials, and the number of competitors directly affect how much supply businesses can create.
* Ancillary factors such as material availability, weather, and the reliability of supply chains also can affect supply.

<https://www.udemy.com/course/save-1000s-each-month-thinking-like-a-supply-chain-expert/>

y GIKDE (General Intervalized Kernel Density Estimator)

Due to the influence of joining WTO and the rapid economic development of China, the exports of the polyester fiber textile industry in Taiwan has changed abruptly. Therefore, the available data concerning exports are too few to reliably predict market demand. This research applies GIKDE, which is uniquely designed for small data learning, to predict the future exports of the polyester fiber textile industry in Taiwan. The detailed description of GIKDE is in the following sections.