**Quantitative Trqding**

How to build your own algorithmic trading business (2nd Edition)

By Ernest P. CHAN

# Intro

* Started reading the book from Wednesday 25th June, 2025
* Here I will keep,
  + some of my reading notes,
  + python implementation to verify the theory,
  + Mathematical derivations to full grasp the concepts
  + Area for further deep dive
* At the end, will make a conclusion of what I have learnt from the book

# Intro

* The key to successfully apply AI/ML to finance is to focus on metalabeling – i.e. finding the probability of profit of your own simple basic strategy, and not use it to predict the market directly
* Alpha decay can be
  + due to competition – too many people trading the same strategy,
  + but equally often it is due to regime shift caused by market structure or macroeconomic changes
* The most agonizing decision a quantitative trader needs to make is to decide when to abandon a strategy during prolonged drawdown
  + Despite repeated effort to evolve it
  + It’s ultimately a discretionary decision – you must judge based on your market knowledge whether there is a fundamental reason your strategy stopped working
  + To gain market knowledge you have to constantly absorb public knowledge disseminated on social media (e.g: @chanep)

# Chapter 1:

# Reference reading

*I will not keep track of all references but the one I believe deserves some emphasizing*

* AI in finance:
  + Dropout ML techniques (Gershgorn, 2017)
  + AI in finance (Chan, 2020) and (Lopez de Padro, 2018)
  + predictnow.ai 🡪 <https://predictnow.ai>
* Adapt or evolve your strategy or watch them die (Lo, 2019)
* Toolkit:
  + R for finance (Regen 2018)
  + Python (Mckinney, 2017)
* Further deep dive
  + Backtesting of options (Chan, 2017)

# Appendix

*All the funny metaphor, quote or wit utilizes by Guisseppe will be noted here*

* “Like Caesar’s Gaul, ….” 🡪 to introduce that something will be divided in three parts
* “if an optimization problem is Othello, then model error must be Iago” 🡪 Some Shakespearean famous tragedy (<https://en.wikipedia.org/wiki/Othello> ) to highlight the dramatic end and real source of issue
* “Theory is cheap and often not hard. What is hard is putting the right tool at the service of the right insight”