Other Race Predicting Algorithms:

* Runbundle.com <https://runbundle.com/tools/race-predictors/general-race-predictors>
  + Features: VO2 max, Age
  + Peter Riegel formula
    - T2= T1\* (D2/D1)^1.06
    - Time in seconds, Distance in Meters
    - Best for 3:30- 3:50:00
    - 1.06= rate at which we slow down as races get longer
  + Dave Cameron Formula
    - T2=(T1/D1)\*D2\* (f(D1)/f(D2))
    - Meters and seconds
    - f(x)= 13.49681 – (0.000030363\* D1)+ (835.7114/ x^0.7905)
    - Created after considering the top times in the world
    - Best for 800- Marathon
  + Daniels and Gilbert VO2 max
    - VO2 max= (-4.60 + 0.182258\*S + 0.000104\*S^2)/(0.8 + 0.1894393\* e^(-0.012778\*T) + 0.2989558\* e^(-0.1932605))
    - Speed in meters/sec
    - Time in seconds
    - Use vo2 max value to generate predicted times
  + Age Grading Tables
    - Using time to convert to age grading percentage to generate predicted times at other distances
* <https://www.saltyrunning.com/best-race-prediction-calculator/>
  + “Both the VDOT and McMillan calculators often overestimate one’s ability in the marathon. Why? These calculators assume that you are training around 70 or more miles per week and use statistics from elite runners”
  + Daniels= longer distance, McMillan= shorter and faster
  + Runners World calculator uses stats from recreational runners
    - Uses total mileage but not accounting how much mileage is quality
    - <https://bmcsportsscimedrehabil.biomedcentral.com/articles/10.1186/s13102-016-0052->y
  + <https://www.amazon.com/Lore-Running-4th-Timothy-Noakes/dp/0873229592> (Book about running)
    - “~ the average recreational runner (read: non-elite) will start seeing diminishing returns once they increase their mileage to over 70-75 miles per week. Past that point, and the miles are less effective in aerobic development and more likely to cause injury.” 🡪 Runners World doesn’t account for overtraining, burnout, injuries at higher mileage
    - Also doesn’t account for race course
* <https://www.runnersworld.com/advanced/a20836392/the-science-and-guesswork-of-race-equivalent-predictors/>
  + Elite runners skew results
  + Use your own knowledge about being more of a speed or more of an endurance runner
  + Accounting for wind, temperature, altitude is also important
* Riegel, Peter S. (May–June 1981). "Athletic Records and Human Endurance". American Scientist. 69: 285–290. READ
* <https://www.theguardian.com/lifeandstyle/the-running-blog/2017/mar/28/the-formula-for-marathon-success>
  + Article about how the factor of 1.06 is way too optimistic for the average runner (in the Riegel formula), and suggests that 1.15 is more accurate, although it gives the example of Paula radcliffe’s factor of 1.02 when converting her half marathon to full marathon
* <https://web.wpi.edu/Pubs/E-project/Available/E-project-060107-132716/unrestricted/AlexWhite_MQP.pdf> READ