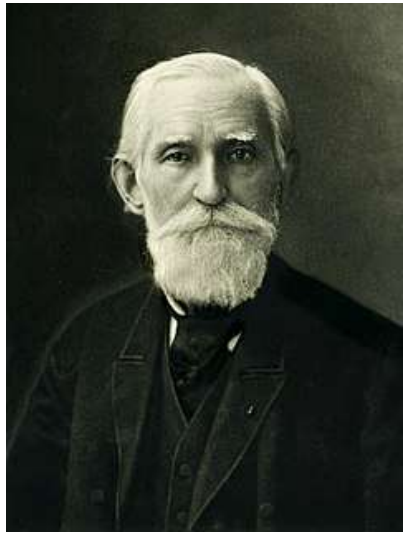
Pafnuty (Path-New-Ty) Lvovich Chebyshev (1821-1894) (After https://en.wikipedia.org/wiki/Pafnuty_Chebyshev)



It is suggestedChebyshev was the first person to think systematically in terms of random variables and their moments and expectations.

Russian mathematician and considered to be the founding father of Russian mathematics.

Known for his fundamental contributions to the fields of probability, statistics, mechanics, and number theory.

Important mathematical concepts are named after him, include the Chebyshev inequality, the Bertrand–Chebyshev theorem, Chebyshev polynomials, and Chebyshev bias.

The Chebyshev inequality states that if $\boldsymbol{X}$ is a random variable with standard deviation $\boldsymbol{\sigma} > 0$, then the probability that the outcome of $\boldsymbol{X}$ is no less than a $\boldsymbol{\sigma}$*k away from its mean is no more than 1 / k^2:

$$\Pr (| \boldsymbol{X} - \mathrm{E} (\boldsymbol{X}) | \geq k \sigma) \leq 1/k^2$$

The Chebyshev inequality is used to prove the weak law of large numbers.

No distributional assumptions, but independence assumed