# List of notation for "Statistics for Data Science" Course

## Updated – October 29, 2017

1. Slide 20: $F^c$ complement of a set $F$

2. Slide 27: $F_X^-$ quantile function of random variable $X$

3. Slide 38: $X \perp\!\!\!\perp Y$, $X \perp\!\!\!\perp_Z Y$ : $X$ and $Y$ are independent, conditionally independent on $Z$

4. Slide 39: $J_f$: Jacobian of a function $f : \mathbb{R}^n \to \mathbb{R}^n$

5. Slide 54: $M_X$: moment generating function of a random variable $X$

6. Slide 66: $\Phi$: distribution function of a standard normal random variable

7. Slide 68: $H(X)$: entropy of a random variable $X$

8. Slide 69: $KL(q||p)$: Kullback–Leibler divergence of $q$ with respect to $p$

9. Slide 82: $\mathcal{U}[0, \theta]$: uniform random variable on $[0, \theta]$

10. Slide 103,105: $\xrightarrow{p}$ and $\xrightarrow{d}$ denote convergence in probability and in distribution

11. Slide 123: MSE: mean squared error

12. Slide 132: $\mathcal{I}_n$: Fisher information

13. Slide 160: $\mathcal{J}_1$: expected value of the second derivative of the log likelihood. In exponential families, it equals $\mathcal{I}_1$ (see slide 161)