Useful background references

Textbooks and notes covering multiple topics referenced multiple times below:

- PSDS = `https://cims.nyu.edu/~cfgranda/pages/stuff/probability_stats_for_DS.pdf`
- MLPP = P. Murphy, K. (1991). Machine Learning: A Probabilistic Perspective. `http://noiselab.ucsd.edu/ECE228/Murphy_Machine_Learning.pdf` (more advanced)
- CO = `https://web.stanford.edu/~boyd/cvxbook/bv_cvxbook.pdf`

Linear Algebra

- General short reference - Appendix B of PSDS
- Matrix properties - 3 of `http://cs229.stanford.edu/section/cs229-linalg.pdf`
- Matrix calculus
  - 4 of `http://cs229.stanford.edu/section/cs229-linalg.pdf`
  - Matrix cookbook `https://www.math.uwaterloo.ca/~hwolkowi/matrixcookbook.pdf`
- Vector spaces, spans and dimensions - B.1 of PSDS
- Inner products and norms - B.2 of PSDS
- Linear regression - 12 of PSDS

Optimization

- General quick note - `https://davidrosenberg.github.io/mlcourse/Notes/convex-optimization.pdf`
- Convex functions - 3 of CO
- Lagrangian formulation and duality - 5 of CO

Probabilities and Statistics

- Quick note: Review of Probability Theory, Arian Maleki and Tom DoStanford University `http://cs229.stanford.edu/section/cs229-prob.pdf`
- Conditional expectations - 4.4. of PSDS
- Multivariate Gaussian distributions - 2.5.2 of MLPP
- Bayesian Statistics - 10 of PSDS
- Random variables and important simple laws - 2.1 to 2.5 of PSDS - 2.3 and 2.4 of MLPP