1. **Linear Solvers**

<https://stackoverflow.com/questions/9071020/compute-projection-hat-matrix-via-qr-factorization-svd-and-cholesky-factoriz>

<https://makarandtapaswi.wordpress.com/2011/07/08/cholesky-decomposition-for-matrix-inversion>

* 1. **(Default) Regularized Cholesky Decomposition Solver [Scipy][PyTorch]**
     1. **When N >= P**

* + 1. **When N < P**

**Statistical Inference**

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| Theta Estimation Cost |  |
| Inference Additional Cost |  |

* 1. **Regularized Singular Value Decomposition Solver [Numba??][Scipy][PyTorch]**
     1. **When N >= P**
     2. **When N < P**

**Statistical Inference**

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| Theta Estimation Cost |  |
| Inference Additional Cost |  |

* 1. **Regularized PseudoInverse Solver [Numba][Scipy][PyTorch]**