Overdetermined mixed linear/quadratic system − least squares problem

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I have a system of k linear and m quadratic equations in d unknown variables, k+m>d, so the number of equations is bigger than the number of unknowns and the system is overdetermined.

A least square solution is required in this case. What is most optimal way to find that solution?

If the system were purely linear, I could just multiply pseudoinverse of the matrix by the right hand side vector and that would be it (minimizing ||Ax−b||).

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