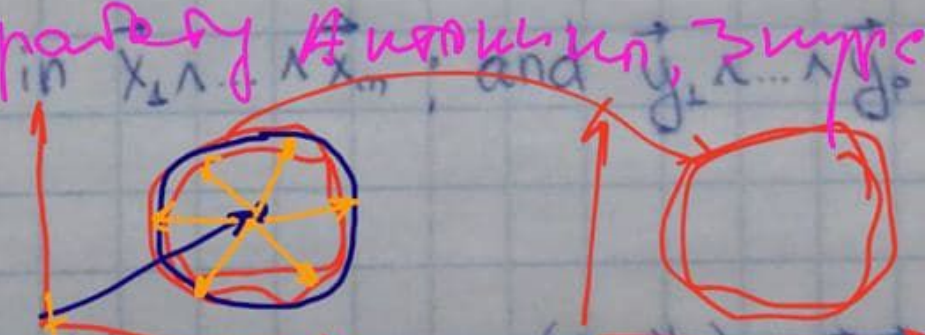


complement of \vec{c}_1 in $X_1 \wedge \dots \wedge X_m$; and $\vec{y}_1 \wedge \dots \wedge \vec{y}_p$ to $\vec{d}_1 \perp (\vec{y}_1 \wedge \dots \wedge \vec{y}_p)$.



As a result, we will obtain a pair (\vec{c}_2, \vec{d}_2) ; $\vec{c}_1 \vec{c}_2 = \vec{c}_1 \wedge \vec{c}_2$.

$\vec{d}_1 \vec{d}_2 = \vec{d}_1 \wedge \vec{d}_2$. Steps 2-4 then can be repeated once again.

and again, up to $\min\{m, p\}$ times in total.

GA vs PLS

Statement: this process is equivalent to Canonical Correlation Analysis.

more precisely, $\vec{c}_i = X \vec{a}_i$, $\vec{d}_i = Y \vec{b}_i$ ($i = 1 \dots l \leq \min\{m, p\}$)

where pairs (\vec{a}_i, \vec{b}_i) are obtained in CCA \equiv PLS

- 1, 2 and 3
2. and 3. are orthogonal
3. every column
4. Permutation
5. The next step
6. Prob.
7. Cramer's rule