

Pathway Knowledge Validation

1. 'PRS', 'QARS', 'IARS', 'LARS', 'RARS', 'MARS'
2. 'MAPK3', 'MYC', 'YWHAZ', 'FOS', 'PRKCD', 'ATF1', 'MYCN', 'ETS1'
3. 'TGFB2', 'MYC', 'ATR', 'CCND2', 'TP53'
4. 'YWHAZ', 'ATR', 'MDM2', 'TP53'
5. 'EIF2AK3', 'XBP1', 'HSPA5'
6. 'MAX', 'TGFB2', 'MYC', 'MAPKAPK2', 'ATF1'
7. 'MAPK3', 'NCOA3', 'NCOA1', 'CCNH', 'DDX5', 'NCOA2'
8. 'PSMC5', 'PSMC4', 'SKP2', 'PSMD6', 'MDM2', 'PSMD1', 'PSMA2', 'HSPA5'
9. 'MAPK3', 'FOS', 'EGFR'
10. 'B2M', 'HLA-C', 'HLA-B'

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'PRS'	---	None
'QARS'	---	Column 3266
'IARS'	---	Column 4281 and 6141
'LARS'	---	Column 11412
'RARS'	---	Column 740
'MARS'	---	Column 3046, 12071, and 12312

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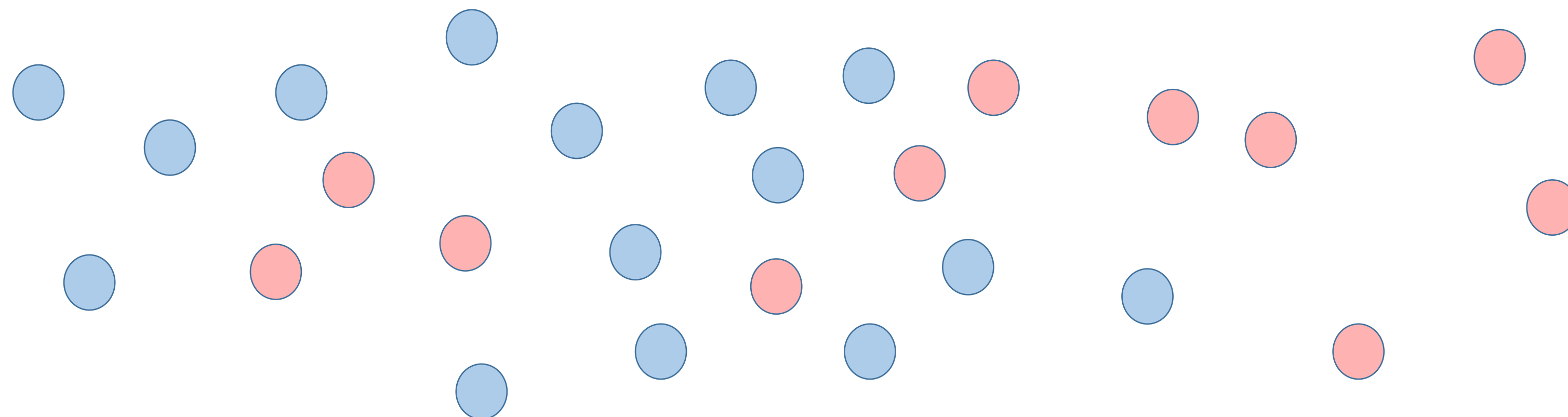
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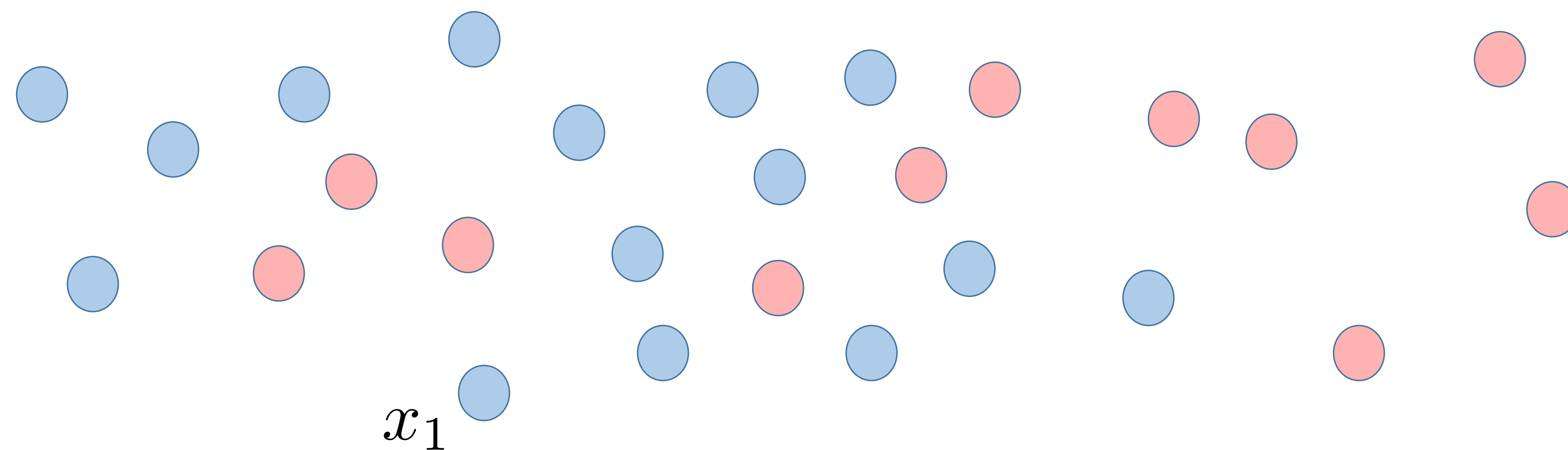
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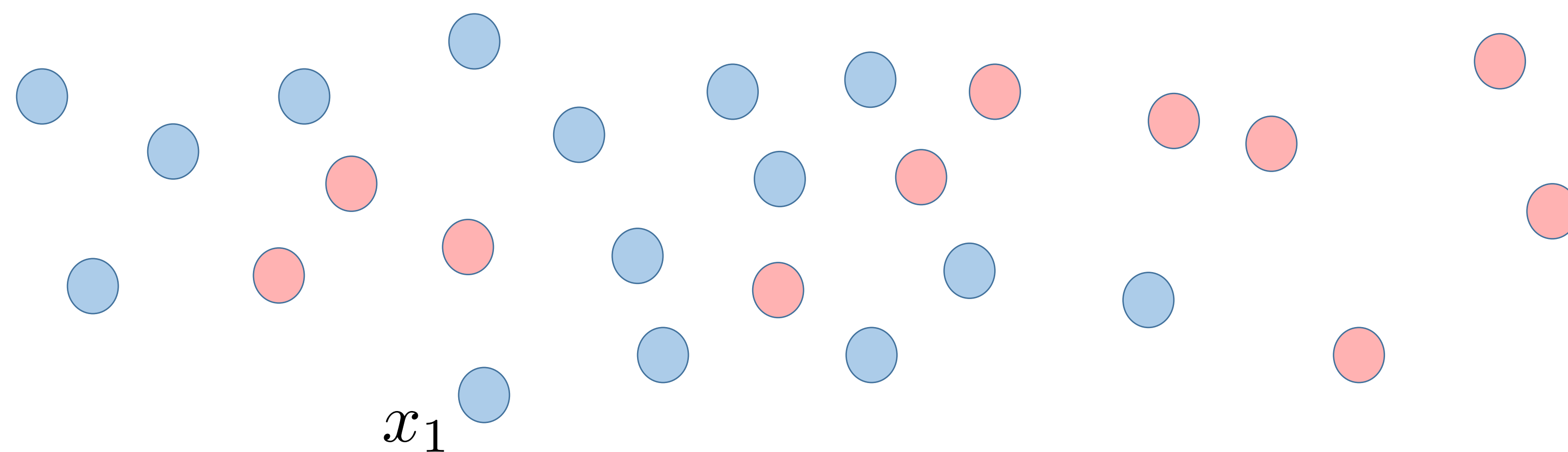
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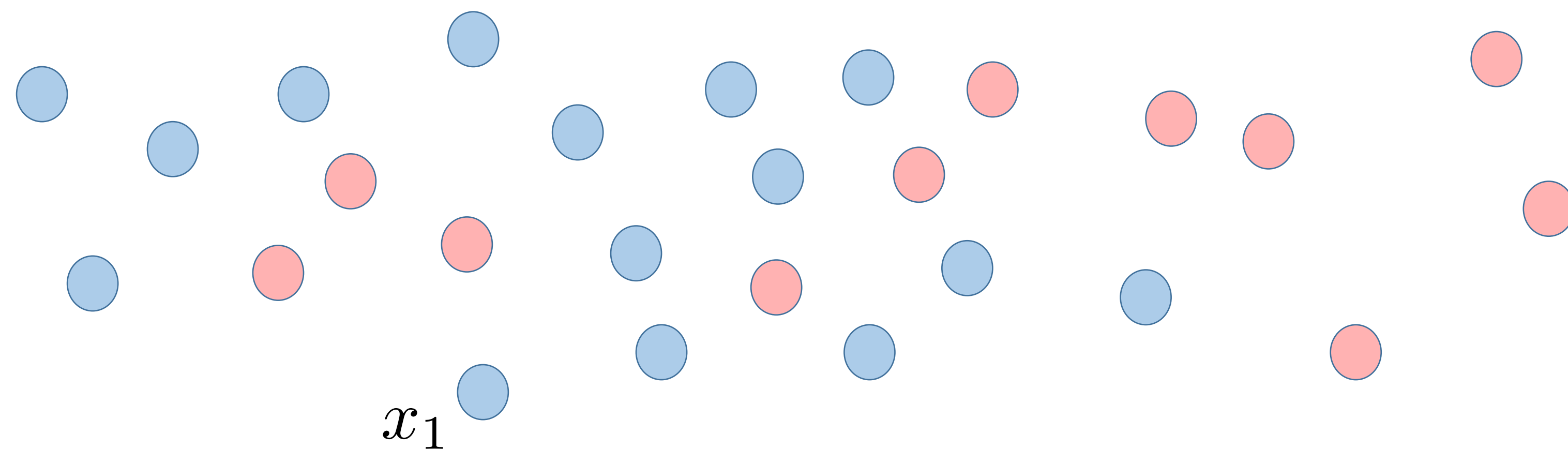


$$\lambda_1(x_1) = \log [f^1(x_1) / f^2(x_1)]$$

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A vector of log-likelihood ratios of the selected pathway

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A vector of log-likelihood ratios of the selected pathway

- t-test
- Bayesian networks using pathway genes

Pathway Knowledge Validation

t Statistic: -0.2924166654622887	--- Pathway 3
t Statistic: -0.316408526146966	--- Pathway 6
t Statistic: -0.4241892222903977	--- Pathway 10
t Statistic: -0.679614492671655	--- Pathway 1
t Statistic: -1.2325947262657646	--- Pathway 8
t Statistic: -1.2396967112676367	--- Pathway 5
t Statistic: -1.5268190318599104	--- Pathway 9
t Statistic: -1.6556065284979935	--- Pathway 7
t Statistic: -1.6585667548776735	--- Pathway 4
t Statistic: -1.789876695423878	--- Pathway 2

Pathway Knowledge Validation

Bayesian networks

Accuracy: 0.6 --- Pathway 1

Accuracy: 0.6667 --- Pathway 2

Accuracy: 0.6667 --- Pathway 3

Accuracy: 0.6667 --- Pathway 4

Accuracy: 0.6667 --- Pathway 5

Accuracy: 0.6667 --- Pathway 6

Accuracy: 0.6667 --- Pathway 7

Accuracy: 0.6667 --- Pathway 8

Not enough information --- Pathway 9

Not enough information --- Pathway 10