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$\begin{array}{ll} \rho & {\rm Number of amino acids successfully removed by} \\ {\rm Edman degradation} \\ \hline c & {\rm Color of N-terminal amino acid} \\ \hline \lambda_{\rho,c} & {\rm Number of amino acids which can accept a label} \\ {\rm of color } c \ when \ \rho \ amino acids have been removed \\ {\rm from the peptide} \\ \hline \phi_c & {\rm Number of functioning fluorophores of color } c \\ {\rm remaining for the peptide} \\ \hline \alpha & {\rm Number of amino acids in the peptide (before \\ {\rm sequencing}) \\ \hline p_c & {\rm Fluorophore loss rate for color } c \\ \hline {\bf B}^{(c)} & {\rm A factored component of } {\bf T} \ representing loss of \\ {\rm fluorophores of color } c \\ \hline {\bf B}^{(c)} & {\rm A pruned approximation of } {\bf B}^{(c)} \ {\rm at timestep } t \\ \hline e & {\rm Edman cycle failure rate} \\ \hline {\bf \mathcal{E}} & {\rm A factored component of } {\bf T} \ representing Edman \\ degradation success and failure \\ \hline {\bf c}^{(t)} & {\rm A pruned approximation of } {\bf c} \ {\rm at timestep } t \\ \hline d & {\rm Peptide detachment rate} \\ \hline {\bf D} & {\rm A factored component of } {\bf T} \ representing peptide \\ detachment \\ \hline {\bf D}^{(t)} & {\rm A pruned approximation of } {\bf D} \ {\rm at timestep } t \\ \hline r & {\rm Number of values of } {\bf O} \ kept \ during \ pruning \\ r_c^{(t)} & r_c \ {\rm at time } t \\ \hline \hline {\bf n} \ {\rm Number of amino acid counts kept \ during \ pruning \\ r_c^{(t)} & $r_{a} \ time t \\ \hline h & {\rm The number of peptides \ selected \ by \ the \ kNN \ in \ the \ hybrid \ model} \\ \hline \hline \zeta_h & {\rm The set of \ peptides \ selected \ by \ the \ kNN \ in \ the \\ \hline \end{array} \right}$	Λ_c	The number of fluorophores of color <i>c</i>
$ \begin{array}{c} \bar{c} & \text{Color of N-terminal amino acid} \\ \lambda_{\rho,c} & \text{Number of amino acids which can accept a label} \\ \text{of color } c \text{ when } \rho \text{ amino acids have been removed} \\ \text{from the peptide} \\ \phi_c & \text{Number of functioning fluorophores of color } c \\ \text{remaining for the peptide} \\ \alpha & \text{Number of amino acids in the peptide (before sequencing)} \\ p_c & \text{Fluorophore loss rate for color } c \\ \mathcal{B}^{(c)} & \text{A factored component of } \mathcal{T} \text{ representing loss of fluorophores of color } c \\ \mathcal{B}^{(c)} & \text{A factored component of } \mathcal{B}^{(c)} \text{ at timestep } t \\ e & \text{Edman cycle failure rate} \\ \mathcal{E} & \text{A factored component of } \mathcal{F} \text{ representing Edman degradation success and failure} \\ \widehat{\mathcal{E}}^{(t)} & \text{A pruned approximation of } \mathcal{E} \text{ at timestep } t \\ d & \text{Peptide detachment rate} \\ \mathcal{D} & \text{A factored component of } \mathcal{T} \text{ representing peptide detachment} \\ \widehat{\mathcal{D}}^{(t)} & \text{A pruned approximation of } \mathcal{D} \text{ at timestep } t \\ r & \text{Number of values of } \mathcal{O} \text{ kept during pruning} \\ r_c^{(t)} & r_c \text{ at time } t \\ \hline \overline{r} & \text{Number of fluorophore counts of color } c \\ kept \\ \frac{\overline{r}^{(t)}}{r} & \overline{r} \text{ at time } t \\ h & \text{The number of peptides selected by the kNN in the} \\ \hline \lambda_h & \text{The set of peptides selected by the kNN in the} \\ \end{array}$		Number of amino acids successfully removed by
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$ \begin{aligned} \phi_c & \text{Number of functioning fluorophores of color } c \\ remaining for the peptide \\ \alpha & \text{Number of amino acids in the peptide (before sequencing)} \\ p_c & \text{Fluorophore loss rate for color } c \\ \mathbf{\mathcal{B}}^{(c)} & \text{A factored component of } \mathbf{\mathcal{T}} \text{ representing loss of fluorophores of color } c \\ \mathbf{\mathcal{B}}^{(c)} & \text{A factored component of } \mathbf{\mathcal{T}} \text{ representing loss of fluorophores of color } c \\ \mathbf{\mathcal{B}}^{(c)} & \text{A pruned approximation of } \mathbf{\mathcal{B}}^{(c)} \text{ at timestep } t \\ e & \text{Edman cycle failure rate} \\ \mathbf{\mathcal{E}} & \text{A factored component of } \mathbf{\mathcal{T}} \text{ representing Edman degradation success and failure} \\ \mathbf{\mathcal{E}}^{(t)} & \text{A pruned approximation of } \mathbf{\mathcal{E}} \text{ at timestep } t \\ d & \text{Peptide detachment rate} \\ \mathbf{\mathcal{D}} & \text{A factored component of } \mathbf{\mathcal{T}} \text{ representing peptide detachment} \\ \mathbf{\mathbf{\hat{D}}}^{(t)} & \text{A pruned approximation of } \mathbf{\mathcal{D}} \text{ at timestep } t \\ r & \text{Number of values of } \mathbf{\mathcal{O}} \text{ kept during pruning} \\ r_c & \text{Number of fluorophore counts of color } c \text{ kept during pruning} \\ \mathbf{\bar{r}}^{(t)} & r_c \text{ at time } t \\ \mathbf{\bar{n}} & \text{Number of amino acid counts kept during pruning} \\ \mathbf{\bar{r}}^{(t)} & \mathbf{\bar{r}} \text{ at time } t \\ h & \text{The number of peptides selected by the kNN in the hybrid model} \\ \mathbf{\zeta}_h & \text{The set of peptides selected by the kNN in the} \\ \end{array}$		of color c when ρ amino acids have been removed
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$\begin{array}{c c} & \text{sequencing} \\ \hline p_c & \text{Fluorophore loss rate for color } c \\ \hline \mathcal{B}^{(c)} & \text{A factored component of } \mathcal{T} \text{ representing loss of fluorophores of color } c \\ \hline \mathcal{B}^{(c)} & \text{A pruned approximation of } \widehat{\mathcal{B}}^{(c)} \text{ at timestep } t \\ \hline e & \text{Edman cycle failure rate} \\ \hline \mathcal{E} & \text{A factored component of } \mathcal{T} \text{ representing Edman degradation success and failure} \\ \hline \mathcal{E}^{(t)} & \text{A pruned approximation of } \mathcal{E} \text{ at timestep } t \\ \hline d & \text{Peptide detachment rate} \\ \hline \mathcal{D} & \text{A factored component of } \mathcal{T} \text{ representing peptide detachment} \\ \hline \widehat{\mathcal{D}}^{(t)} & \text{A pruned approximation of } \mathcal{D} \text{ at timestep } t \\ \hline r & \text{Number of values of } \mathcal{O} \text{ kept during pruning} \\ \hline r_c & \text{Number of fluorophore counts of color } c \text{ kept during pruning} \\ \hline r_c^{(t)} & r_c \text{ at time } t \\ \hline \bar{r} & \text{Number of amino acid counts kept during pruning} \\ \hline \bar{r}^{(t)} & \overline{r} \text{ at time } t \\ \hline h & \text{The number of peptides selected by the kNN in the hybrid model} \\ \hline \zeta_h & \text{The set of peptides selected by the kNN in the} \\ \hline \end{array}$		
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$ \begin{array}{c c} \widehat{\boldsymbol{\mathcal{E}}}^{(t)} & \text{A pruned approximation of } \boldsymbol{\mathcal{E}} \text{ at timestep } t \\ \hline \boldsymbol{\mathcal{d}} & \text{Peptide detachment rate} \\ \hline \boldsymbol{\mathcal{D}} & \text{A factored component of } \boldsymbol{\mathcal{T}} \text{ representing peptide} \\ \hline \boldsymbol{\mathrm{detachment}} \\ \hline \boldsymbol{\widehat{\mathcal{D}}}^{(t)} & \text{A pruned approximation of } \boldsymbol{\mathcal{D}} \text{ at timestep } t \\ \hline \boldsymbol{r} & \text{Number of values of } \boldsymbol{\mathcal{O}} \text{ kept during pruning} \\ \hline \boldsymbol{r}_c & \text{Number of fluorophore counts of color } c \text{ kept} \\ \hline \boldsymbol{\mathrm{during pruning}} \\ \hline \boldsymbol{r}_c^{(t)} & \boldsymbol{r}_c \text{ at time } t \\ \hline \boldsymbol{\bar{r}} & \text{Number of amino acid counts kept during pruning} \\ \hline \boldsymbol{\bar{r}}^{(t)} & \boldsymbol{\bar{r}} \text{ at time } t \\ \hline \boldsymbol{h} & \text{The number of peptides selected by the kNN in} \\ \hline \mathbf{the hybrid model} \\ \hline \boldsymbol{\zeta}_h & \text{The set of peptides selected by the kNN in the} \\ \end{array} $	ε	· · · · ·
$\begin{array}{c c} d & \mbox{Peptide detachment rate} \\ \hline {\mbox{\mathcal{D}}} & \mbox{A factored component of \mathcal{T} representing peptide detachment} \\ \hline {\mbox{$\widehat{\mathcal{D}}$}^{(t)}$} & \mbox{A pruned approximation of \mathcal{D} at timestep t} \\ \hline {\mbox{$\widehat{\mathcal{D}}$}^{(t)}$} & \mbox{A pruned approximation of \mathcal{D} at timestep t} \\ \hline {\mbox{r}} & \mbox{Number of values of \mathcal{O} kept during pruning} \\ \hline {\mbox{r_c}} & \mbox{Number of fluorophore counts of color c kept during pruning} \\ \hline {\mbox{r_c}}^{(t)} & \mbox{r_c at time t} \\ \hline {\mbox{\bar{r}}$} & \mbox{Number of amino acid counts kept during pruning} \\ \hline {\mbox{\bar{r}}^{(t)}$} & \mbox{$\bar{r}$ at time t} \\ \hline {\mbox{h}} & \mbox{The number of peptides selected by the kNN in the hybrid model} \\ \hline {\mbox{ζ_h}$} & \mbox{The set of peptides selected by the kNN in the} \\ \end{array}$	A (1)	degradation success and failure
$ \begin{array}{c c} \mathcal{D} & \text{A factored component of } \mathcal{T} \text{ representing peptide} \\ \hline \mathbf{D}^{(t)} & \text{A pruned approximation of } \mathcal{D} \text{ at timestep } t \\ \hline \mathbf{\hat{D}}^{(t)} & \text{A pruned approximation of } \mathcal{D} \text{ at timestep } t \\ \hline \mathbf{r} & \text{Number of values of } \mathcal{O} \text{ kept during pruning} \\ \hline r_c & \text{Number of fluorophore counts of color } c \text{ kept} \\ \hline during \text{ pruning} \\ \hline r_c^{(t)} & r_c \text{ at time } t \\ \hline \overline{r} & \text{Number of amino acid counts kept during pruning} \\ \hline \overline{r}^{(t)} & \overline{r} \text{ at time } t \\ \hline h & \text{The number of peptides selected by the kNN in} \\ \hline \text{the hybrid model} \\ \hline \zeta_h & \text{The set of peptides selected by the kNN in the} \\ \end{array} $		
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