Lecture 11 - scribbles - structured SVM optimization

$$\frac{\operatorname{Structured SVM}}{\operatorname{Structured SVM}} :$$

$$\frac{\operatorname{Structured SVM}}{\operatorname{Ges}} := \operatorname{Max} < \omega_{1}\operatorname{Cl}(x^{(i)}, y^{(j)}) > + \operatorname{Cl}(y^{(i)}, y^{(j)}) = - < \omega_{1}\operatorname{Cl}(x^{(i)}) \operatorname{Structure}^{(i)}) > \\ \operatorname{Ges} := \operatorname{Max} \operatorname{Cl}(y^{(i)}, y^{(i)}) = \operatorname{Max} \operatorname{Cl}(y^{(i)}) - < \omega_{1}\operatorname{Cl}(y^{(i)}) > \\ \operatorname{Ges} := \operatorname{Max} \operatorname{Cl}(y^{(i)}) = - \\ \operatorname{Max} \operatorname{Cl}(y^{(i)}) = \operatorname{Max} \operatorname{Cl}(y^{(i)}) = - \\ \operatorname{Hilw} := \operatorname{Strucge} (-\operatorname{Cl}(y^{(i)}, y^{(i)}, \omega) = - \\ \operatorname{Cl}(y^{(i)}) =$$

Teaching Page 6

min cost network flow problem with integer capacities -> has integer flow solution (see integrality theorem <u>e.g. here</u> -- also consequence of total unimodularity of the constraint matrix)