

# commende

- 7 groups: unit, section, problem name, plain step name, knowledge component, opportunity count, problem view
- $G^{(g)}(i,s)$  ... group g dependent mapping function, which maps a given student s step i pair to a group ID
- $\mathbf{b}_{sq}$  ... N dimensional feature vector for student s and group g
- $\hat{\mathbf{a}}_{iq}$  ... N dimensional feature vector for
- $\mathbf{d}_{q,G^{(g)}(i,s)}$  ... N dimensional feature vector for group g and group ID

Meta parameters
$N = 20, \eta = 0.003, \eta^- = 0.0001, \lambda = 0.001$
$N = 20, \eta = 0.002, \eta^- = 0.0001, \lambda = 0.0$
$N = 20, \eta = 0.005, \eta^- = 0.0002, \lambda = 0.0016$
$N = 50, \eta = 0.005, \eta^- = 0.0002, \lambda = 0.0016$
$N = 60, \eta = 0.005, \eta^- = 0.0002, \lambda = 0.0016$