Slices, labels

Slices

Labels / K classes

Deep Learner

Deep learned model

K - Classes

C-1    C-2    C-3  ----  C-k

Pr-i,j : probability score for the i-th slice regarding the j-th class

prediction

Patient 1
.......
Patient i
.......
.......
.......
.......
.......
Patient M

CT scan

Pre-processing and slices filtering

Slice-1
Slice-2

Slice-N

| Pr-1,1 | Pr-1,2 | Pr-1,3 | Pr-1,k |
| Pr-2,1 | Pr-2,2 | Pr-2,3 | Pr-2,k |
| Pr-N,1 | Pr-N,2 | Pr-N,3 | Pr-N,k |

LSTM

Data considered in one timestep: Features of N slices (Sequence of N features) . Each feature is of size equal to K. For SVR: k=5