Model\_Name : Model\_ANCOR\_balanced\_ANAPHORE\_WOD.model

Train Dataset : balanced\_ANAPHORE\_Train.xlsx

Test Dataset : window\_ANAPHORE\_Test.xlsx

{'precision\_score\_pos': 0.38847117794486213, 'recall\_score\_pos': 0.9212481426448736, 'f1\_score\_pos': 0.5464962538563244, 'precision\_score\_neg': 0.9965447551991655, 'recall\_score\_neg': 0.9399827819456401, 'f1\_score\_neg': 0.967437739312047}

MUC: R=0. 94 P=0. 4104803493449782 F  $_1$ =0. 5714285714285714 B  $_3$ : R=0. 9697452229299363 P=0. 4394820899718672 F  $_1$ =0. 6048501237687547 CEAF\_m: R=0. 5031847133757962 P=0. 512987012987013 F  $_1$ =0. 5080385852090032 CEAF\_e: R=0. 2576955474352516 P=0. 6980613563435928 F  $_1$ =0. 3764289907927907 BLANC: R=0. 9468117776092289 P=0. 6025176974932748 F  $_1$ =0. 6578671069908274 CoNLL-2012 average score: 0. 5175692286633723 Model\_Name : Model\_ANCOR\_balanced\_DIRECTE\_WOD.model

Train Dataset : balanced\_DIRECTE\_Train.xlsx

Test Dataset: window\_DIRECTE\_Test.xlsx

{'precision\_score\_pos': 0.16986706056129985, 'recall\_score\_pos': 0.9465020576131687, 'f1\_score\_pos': 0.2880400751408892, 'precision\_score\_neg': 0.9991656504717283, 'recall\_score\_neg': 0.9326623532231009, 'f1\_score\_neg': 0.9647693118086326}

MUC: R=0. 9768518518518519 P=0. 2060546875 F $_1$ =0. 3403225806451613 B $^3$ : R=0. 994531621493105 P=0. 35791657653810355 F $_1$ =0. 5263925875192554 CEAF $_m$ : R=0. 39443651925820256 P=0. 3955650929899857 F $_1$ =0. 394999999999996 CEAF $_e$ : R=0. 19540867945664098 P=0. 6196649567796155 F $_1$ =0. 2971214023533028 BLANC: R=0. 978916760825927 P=0. 5403596228778154 F $_1$ =0. 572311482592359 CoNLL-2012 average score: 0. 3879455235059065

Model\_Name : Model\_ANCOR\_balanced\_Full\_WOD.model

Train Dataset : balanced\_Full\_Train.xlsx

Test Dataset: window\_Full\_Test.xlsx

{'precision\_score\_pos': 0.38564102564102565, 'recall\_score\_pos': 0.8826291079812206, 'f1\_score\_pos': 0.5367594575303354, 'precision\_score\_neg': 0.9892933618843683, 'recall\_score\_neg': 0.8852270549913777, 'f1\_score\_neg': 0.9343715239154616}

MUC: R=0. 9337278106508876 P=0. 440536013400335 F  $_1$ =0. 5986342943854325 B  $_3$ : R=0. 9550944690403442 P=0. 3952758180389828 F  $_1$ =0. 5591440379971162 CEAF\_m: R=0. 4591881274552597 P=0. 46714031971580816 F  $_1$ =0. 4631300902487343 CEAF\_e: R=0. 21579911065330992 P=0. 6768883167129851 F  $_1$ =0. 3272632553798491 BLANC: R=0. 9208555242940192 P=0. 5859813226662816 F  $_1$ =0. 6344909337027995 CONLL-2012 average score: 0. 49501386258746594

Model\_Name : Model\_ANCOR\_balanced\_INDIRECTE\_WOD. model

Train Dataset : balanced\_INDIRECTE\_Train.xlsx

Test Dataset: window\_INDIRECTE\_Test.xlsx

{'precision\_score\_pos': 0.031055900621118012, 'recall\_score\_pos': 0.7633587786259542, 'f1\_score\_pos': 0.059683676514473295, 'precision\_score\_neg': 0.9977397010572366, 'recall\_score\_neg': 0.8143299214472745, 'f1\_score\_neg': 0.8967528424915626}

MUC: R=0.8770491803278688 P=0.0541497975708502 F  $_1$ =0.10200190657769304 B  $_3$ : R=0.9903746483044573 P=0.1281272794711102 F  $_1$ =0.22689993855758384 CEAF\_m: R=0.1514882274544647 P=0.15230013398838768 F  $_1$ =0.15189309576837418 CEAF\_e: R=0.05138395127382398 P=0.4159560162052139 F  $_1$ =0.09146858884780205 BLANC: R=0.9267084208232885 P=0.5027997118472621 F  $_1$ =0.50083046659583 CoNLL-2012 average score: 0.14012347799435965

Model\_Name : Model\_ANCOR\_representative\_ANAPHORE\_WOD. model

Train Dataset : representative\_ANAPHORE\_Train.xlsx

Test Dataset : window\_ANAPHORE\_Test.xlsx

{'precision\_score\_pos': 0.5545634920634921, 'recall\_score\_pos': 0.8306092124814265, 'f1\_score\_pos': 0.6650803093396788, 'precision\_score\_neg': 0.9928423431908081, 'recall\_score\_neg': 0.972389619972943, 'f1\_score\_neg': 0.9825095529528721}

MUC: R=0. 846P=0. 5866851595006934 F  $_1$ =0. 6928746928746928 B  $_2$ : R=0. 8858653559725945 P=0. 6033546587926509 F  $_1$ =0. 7178133308574018 CEAF\_m: R=0. 6085790884718498 P=0. 6702755905511811 F  $_1$ =0. 6379391100702576 CEAF\_e: R=0. 3863104861298042 P=0. 8105972573367756 F  $_1$ =0. 5232520588935422 BLANC: R=0. 8350734237552655 P=0. 6878726799254531 F  $_1$ =0. 7116396360397668 CoNLL-2012 average score: 0. 6446466942085456

Model\_Name : Model\_ANCOR\_representative\_DIRECTE\_WOD.model

Train Dataset : representative\_DIRECTE\_Train.xlsx

Test Dataset: window\_DIRECTE\_Test.xlsx

{'precision\_score\_pos': 0.37543859649122807, 'recall\_score\_pos': 0.8806584362139918, 'f1\_score\_pos': 0.5264452644526445, 'precision\_score\_neg': 0.9982279254506569, 'recall\_score\_neg': 0.9786724179247543, 'f1\_score\_neg': 0.9883534501013401}

Model\_Name : Model\_ANCOR\_representative\_Full\_WOD.model

Train Dataset : representative\_Full\_Train.xlsx

Test Dataset: window\_Full\_Test.xlsx

{'precision\_score\_pos': 0.6337262012692656, 'recall\_score\_pos': 0.5469483568075117, 'f1\_score\_pos': 0.5871482570348592, 'precision\_score\_neg': 0.9634284992420414, 'recall\_score\_neg': 0.9741968448617232, 'f1\_score\_neg': 0.9687827495315824}

Model\_Name : Model\_ANCOR\_representative\_INDIRECTE\_WOD. model

Train Dataset : representative\_INDIRECTE\_Train.xlsx

Test Dataset: window\_INDIRECTE\_Test.xlsx

{'precision\_score\_pos': 0.07950310559006211, 'recall\_score\_pos': 0.48854961832061067, 'f1\_score\_pos': 0.13675213675213677, 'precision\_score\_neg': 0.9958462492250465, 'recall\_score\_neg': 0.9559033563437277, 'f1\_score\_neg': 0.9754660836825165}

MUC: R=0. 5245901639344263 P=0. 0962406015037594 F  $_1$ =0. 16264294790343076 B  $_2$ : R=0. 9082794706063404 P=0. 37227091545728824 F  $_2$ =0. 5280948468620156 CEAF\_m: R=0. 3619575253924284 P=0. 3927855711422846 F  $_2$ =0. 3767419509851033 CEAF\_e: R=0. 20939645402654364 P=0. 604294271229755 F  $_2$ =0. 31102008086477345 BLANC: R=0. 6750534705235356 P=0. 5193053317399506 F  $_2$ =0. 49425612462430224 CoNLL-2012 average score: 0. 3339192918767399

Model\_Name : Model\_ANCOR\_window\_ANAPHORE\_WOD. model

Train Dataset : window\_ANAPHORE\_Train.xlsx

Test Dataset : window\_ANAPHORE\_Test.xlsx

{'precision\_score\_pos': 0.649706457925636, 'recall\_score\_pos': 0.4933135215453195, 'f1\_score\_pos': 0.5608108108108107, 'precision\_score\_neg': 0.9792377009254749, 'recall\_score\_neg': 0.9889927438199484, 'f1\_score\_neg': 0.9840910481551735}

MUC: R=0. 516P=0. 671875  $F_1$ =0. 583710407239819

B<sup>3</sup>: R=0. 5548315602836879 P=0. 7022204153114836 F<sub>1</sub>=0. 6198853448456031 CEAF\_m: R=0. 4563829787234043 P=0. 7513134851138353 F<sub>1</sub>=0. 5678358702845797 CEAF\_e: R=0. 34618318550136734 P=0. 8145486717679231 F<sub>1</sub>=0. 4858711375457787 BLANC: R=0. 4271975003698949 P=0. 7357549612646697 F<sub>1</sub>=0. 5082928936070427 CoNLL-2012 average score: 0. 5631556298770669

Model\_Name : Model\_ANCOR\_window\_DIRECTE\_WOD.model

Train Dataset : window\_DIRECTE\_Train.xlsx

Test Dataset: window\_DIRECTE\_Test.xlsx

CEAF\_m: R=0. 5846153846153846 P=0. 875F1=0. 7009222661396575

CEAF\_e: R=0. 5267716012485887 P=0. 8992743764172335 F1=0. 664371570967877

BLANC: R=0. 49026418966065255 P=0. 875F<sub>1</sub>=0. 6204246078601643

CoNLL-2012 average score: 0.6885798608120789

Model\_Name : Model\_ANCOR\_window\_Full\_WOD.model

Train Dataset : window\_Full\_Train.xlsx

Test Dataset: window\_Full\_Test.xlsx

{'precision\_score\_pos': 0.765685019206146, 'recall\_score\_pos': 0.4679186228482003, 'f1\_score\_pos': 0.5808644973288004, 'precision\_score\_neg': 0.9579051628079732, 'recall\_score\_neg': 0.9883119371527113, 'f1\_score\_neg': 0.9728710194586777}

MUC: R=0. 5408284023668639 P=0. 778534923339012 F  $_1$ =0. 638268156424581 B  $_3$ : R=0. 5375447987067705 P=0. 7981527471403737 F  $_1$ =0. 6424251644884392 CEAF\_m: R=0. 49295774647887325 P=0. 7874015748031497 F  $_1$ =0. 606323083585968 CEAF\_e: R=0. 4183031817424621 P=0. 7964381771586613 F  $_1$ =0. 5485161448162275 BLANC: R=0. 41319359916517184 P=0. 8076454031106886 F  $_1$ =0. 5361101091471889 CoNLL-2012 average score: 0. 6097364885764159

Model\_Name : Model\_ANCOR\_window\_INDIRECTE\_WOD. model

Train Dataset : window\_INDIRECTE\_Train.xlsx

Test Dataset: window\_INDIRECTE\_Test.xlsx

{'precision\_score\_pos': 0.125, 'recall\_score\_pos': 0.015267175572519083, 'f1\_score\_pos': 0.027210884353741496, 'precision\_score\_neg': 0.992375435900467, 'recall\_score\_neg': 0.9991668650321353, 'f1\_score\_neg': 0.9957595706194585}

MUC: R=0. 02459016393442623 P=0. 1875  $F_1$ =0. 04347826086956522

B<sup>3</sup>: R=0. 09333333333333332 P=0. 442666666666666 F<sub>1</sub>=0. 1541625207296849

CEAF\_m: R=0. 048P=0. 48 F<sub>1</sub>=0. 087272727272728

CEAF\_e: R=0. 04482886904761905 P=0. 6375661375661376 F<sub>1</sub>=0. 083767813694821

BLANC: R=0. 015682557904829187 P=0. 5555555555555555 F<sub>1</sub>=0. 02748180873180873

CoNLL-2012 average score: 0.09380286509802371