ubuntu@ip-172-31-19-136:~/tensorflow-cpu/examples/tutorials$ python word2vec\_basic.py source ~/tensorflow-cpu/bin/activate

Traceback (most recent call last):

File "word2vec\_basic.py", line 30, in <module>

import tensorflow as tf

ImportError: No module named tensorflow

ubuntu@ip-172-31-19-136:~/tensorflow-cpu$ source bin/activate

(tensorflow-cpu) ubuntu@ip-172-31-19-136:~/tensorflow-cpu$ ls

bin examples include lib local pip-selfcheck.json scripts share

(tensorflow-cpu) ubuntu@ip-172-31-19-136:~/tensorflow-cpu$ cd examples/tutorials/

(tensorflow-cpu) ubuntu@ip-172-31-19-136:~/tensorflow-cpu/examples/tutorials$ l

word2vec\_basic.py

(tensorflow-cpu) ubuntu@ip-172-31-19-136:~/tensorflow-cpu/examples/tutorials$ python word2vec\_basic.py

Found and verified text8.zip

Data size 17005207

Most common words (+UNK) [['UNK', 418391], ('the', 1061396), ('of', 593677), ('and', 416629), ('one', 411764)]

Sample data [5239, 3084, 12, 6, 195, 2, 3137, 46, 59, 156] ['anarchism', 'originated', 'as', 'a', 'term', 'of', 'abuse', 'first', 'used', 'against']

3084 originated -> 12 as

3084 originated -> 5239 anarchism

12 as -> 6 a

12 as -> 3084 originated

6 a -> 195 term

6 a -> 12 as

195 term -> 6 a

195 term -> 2 of

2017-11-02 09:37:26.283161: W tensorflow/core/platform/cpu\_feature\_guard.cc:45] The TensorFlow library wasn't compiled to use SSE4.1 instructions, but these are available on your machine and could speed up CPU computations.

2017-11-02 09:37:26.283205: W tensorflow/core/platform/cpu\_feature\_guard.cc:45] The TensorFlow library wasn't compiled to use SSE4.2 instructions, but these are available on your machine and could speed up CPU computations.

2017-11-02 09:37:26.283217: W tensorflow/core/platform/cpu\_feature\_guard.cc:45] The TensorFlow library wasn't compiled to use AVX instructions, but these are available on your machine and could speed up CPU computations.

2017-11-02 09:37:26.283228: W tensorflow/core/platform/cpu\_feature\_guard.cc:45] The TensorFlow library wasn't compiled to use AVX2 instructions, but these are available on your machine and could speed up CPU computations.

2017-11-02 09:37:26.283235: W tensorflow/core/platform/cpu\_feature\_guard.cc:45] The TensorFlow library wasn't compiled to use FMA instructions, but these are available on your machine and could speed up CPU computations.

Initialized

Average loss at step 0 : 315.634796143

Nearest to be: bogs, aba, thurgood, polo, conquering, effective, zenith, fief,

Nearest to as: tessellations, eldest, er, deprived, operator, broadway, dare, welsh,

Nearest to eight: mamluks, chestnuts, differ, spraying, insensible, sayed, jokingly, demiurge,

Nearest to between: parse, courts, intron, depressants, uzi, introducing, primer, tibeto,

Nearest to many: epistle, gunboats, dependent, validity, embarked, venter, expressiveness, fertilize,

Nearest to all: hazardous, pharmacologic, woo, exaggerate, undergrowth, industrialisation, coasts, carcasses,

Nearest to their: seychelles, equivocal, childish, sachsen, secretary, saucers, assigns, larch,

Nearest to of: gst, hauling, kos, plebiscite, engineer, himmel, collectivist, clermont,

Nearest to four: beep, aldermen, reconcile, rendering, nk, formalism, liabilities, seventies,

Nearest to they: kitchens, soldiery, easier, doth, sasson, vulcan, polydor, munroe,

Nearest to use: exaggeration, grapevine, auc, soloist, bianchi, milo, demesne, morava,

Nearest to system: salary, mythologie, walther, devito, forwards, quartet, wealthier, bolster,

Nearest to if: coals, guarantee, predisposition, hebrews, erratic, rationalistic, trustee, orientations,

Nearest to war: faced, qasim, sometime, orig, ocean, christiern, mongols, imprecise,

Nearest to nine: restricting, lj, melodrama, liquids, rapier, logudorese, turner, portray,

Nearest to into: bronx, creed, shema, ablaze, ferruccio, trailers, sandstone, reestablishment,

Average loss at step 2000 : 113.668070925

Average loss at step 4000 : 52.6689665148

Average loss at step 6000 : 33.5053369646

Average loss at step 8000 : 23.6248336583

Average loss at step 10000 : 17.6401212342

Nearest to be: is, effective, var, have, ancestral, capture, fief, fao,

Nearest to as: by, collections, in, easy, surveillance, and, lymphoma, with,

Nearest to eight: nine, archie, six, zero, three, mathbf, phi, five,

Nearest to between: courts, gland, murders, dr, introducing, vision, therapies, mesa,

Nearest to many: dependent, the, widely, health, duke, survive, validity, goddess,

Nearest to all: abandonment, nsu, important, rewards, prefer, coasts, charge, goals,

Nearest to their: the, a, agave, coke, lnot, work, herbert, branden,

Nearest to of: in, and, for, omnibus, with, on, at, the,

Nearest to four: five, nine, eight, one, zero, gland, three, six,

Nearest to they: easier, senior, evacuation, coppola, destroyer, static, tended, complicating,

Nearest to use: frau, mosque, constitutional, exaggeration, lymphoma, archie, evolution, tribes,

Nearest to system: withdrew, mythologie, smooth, walther, salary, featured, gland, minor,

Nearest to if: austin, predisposition, sections, courts, fact, counted, electro, where,

Nearest to war: faced, lymphoma, bckgr, head, priscus, sometime, act, nation,

Nearest to nine: archie, eight, zero, five, one, mathbf, phi, seven,

Nearest to into: bronx, creed, for, and, pilots, lymphoma, bishop, of,

Average loss at step 12000 : 14.015401998

Average loss at step 14000 : 11.7407268647

Average loss at step 16000 : 9.98340613377

Average loss at step 18000 : 8.64317975509

Average loss at step 20000 : 8.01851167154

Nearest to be: have, is, fief, was, as, by, var, capture,

Nearest to as: and, for, agouti, by, apatosaurus, is, in, with,

Nearest to eight: nine, zero, five, six, four, seven, three, two,

Nearest to between: under, courts, gland, of, luc, tunes, with, introducing,

Nearest to many: the, dependent, embarked, dasyprocta, duke, epistle, widely, agouti,

Nearest to all: abandonment, agouti, apatosaurus, dasyprocta, rewards, hazardous, the, nsu,

Nearest to their: the, his, its, a, numa, agave, agouti, coke,

Nearest to of: and, in, for, omnibus, with, circ, nine, zero,

Nearest to four: five, eight, nine, three, zero, six, two, agouti,

Nearest to they: he, easier, not, complicating, destroyer, static, evacuation, coppola,

Nearest to use: operatorname, agouti, dasyprocta, circ, frau, homomorphism, constitutional, tribes,

Nearest to system: withdrew, mythologie, agouti, smooth, salary, walther, apatosaurus, gland,

Nearest to if: where, guarantee, dasyprocta, courts, sections, predisposition, austin, fact,

Nearest to war: faced, lymphoma, priscus, head, bckgr, dominicans, sometime, ocean,

Nearest to nine: eight, six, seven, zero, five, four, three, agouti,

Nearest to into: for, in, bronx, was, scrutiny, and, outside, senior,

Average loss at step 22000 : 6.98644193935

Average loss at step 24000 : 6.91331994593

Average loss at step 26000 : 6.78391576624

Average loss at step 28000 : 6.35288904548

Average loss at step 30000 : 5.89663730633

Nearest to be: aba, have, is, by, was, fief, as, are,

Nearest to as: agouti, by, apatosaurus, and, is, for, in, collections,

Nearest to eight: nine, five, six, four, seven, zero, three, agouti,

Nearest to between: with, under, courts, tunes, of, gland, dr, void,

Nearest to many: some, the, embarked, dependent, dasyprocta, agouti, aba, accidental,

Nearest to all: abandonment, agouti, any, dasyprocta, pharmacologic, apatosaurus, exaggerate, charge,

Nearest to their: his, the, its, a, her, agave, numa, them,

Nearest to of: and, in, for, omnibus, with, circ, from, nine,

Nearest to four: five, eight, six, three, seven, nine, zero, two,

Nearest to they: he, not, it, there, complicating, easier, destroyer, static,

Nearest to use: operatorname, agouti, dasyprocta, circ, frau, exaggeration, constitutional, tribes,

Nearest to system: withdrew, mythologie, smooth, agouti, walther, forwards, salary, but,

Nearest to if: where, guarantee, courts, dasyprocta, encryption, sections, predisposition, fact,

Nearest to war: faced, lymphoma, ocean, priscus, dominicans, head, sometime, hail,

Nearest to nine: eight, seven, six, five, four, zero, three, agouti,

Nearest to into: for, in, bronx, on, and, was, leading, outside,

Average loss at step 32000 : 5.93009070837

Average loss at step 34000 : 5.66080470574

Average loss at step 36000 : 5.77431555438

Average loss at step 38000 : 5.46459008992

Average loss at step 40000 : 5.23896654582

Nearest to be: have, aba, by, was, is, been, eight, as,

Nearest to as: agouti, collections, apatosaurus, and, for, aba, by, hbox,

Nearest to eight: six, nine, seven, five, four, three, zero, one,

Nearest to between: with, under, in, from, tunes, dr, gland, courts,

Nearest to many: some, embarked, several, dasyprocta, agouti, aba, dependent, the,

Nearest to all: any, abandonment, agouti, woo, dasyprocta, apatosaurus, rabid, pharmacologic,

Nearest to their: its, his, the, her, some, them, agave, agouti,

Nearest to of: omnibus, in, zero, for, nine, circ, and, agouti,

Nearest to four: five, six, three, eight, seven, zero, two, agouti,

Nearest to they: he, it, there, not, complicating, who, easier, we,

Nearest to use: agouti, dasyprocta, operatorname, circ, exaggeration, frau, akita, grapevine,

Nearest to system: withdrew, mythologie, walther, smooth, forwards, wort, agouti, chapters,

Nearest to if: where, guarantee, courts, dasyprocta, encryption, but, serbs, fact,

Nearest to war: faced, lymphoma, dominicans, priscus, ocean, head, optionally, hail,

Nearest to nine: eight, seven, six, zero, five, four, three, agouti,

Nearest to into: bronx, for, in, leading, outside, from, senior, on,

Average loss at step 42000 : 5.34190693104

Average loss at step 44000 : 5.25036649632

Average loss at step 46000 : 5.25132585084

Average loss at step 48000 : 5.19449927831

Average loss at step 50000 : 4.99730358422

Nearest to be: have, aba, is, by, was, been, are, were,

Nearest to as: agouti, by, for, lanes, and, goo, hbox, eight,

Nearest to eight: six, nine, seven, four, five, three, zero, agouti,

Nearest to between: with, under, in, tunes, from, lactose, dr, gigantopithecus,

Nearest to many: some, several, embarked, each, dasyprocta, dependent, aba, agouti,

Nearest to all: any, agouti, three, abandonment, woo, apatosaurus, dasyprocta, two,

Nearest to their: its, his, the, her, roshan, them, some, agouti,

Nearest to of: in, for, circ, eight, agouti, nine, omnibus, and,

Nearest to four: three, six, five, eight, two, seven, agouti, one,

Nearest to they: he, there, it, we, not, complicating, who, you,

Nearest to use: agouti, dasyprocta, operatorname, circ, akita, tribes, frau, exaggeration,

Nearest to system: withdrew, mythologie, walther, forwards, smooth, wort, salary, agouti,

Nearest to if: where, guarantee, when, dasyprocta, but, courts, serbs, and,

Nearest to war: faced, lymphoma, dominicans, ocean, hail, priscus, disappeared, sometime,

Nearest to nine: eight, six, seven, zero, three, five, four, agouti,

Nearest to into: bronx, in, for, leading, on, outside, to, senior,

Average loss at step 52000 : 5.04216126001

Average loss at step 54000 : 5.19341617537

Average loss at step 56000 : 5.03965622258

Average loss at step 58000 : 5.06198537147

Average loss at step 60000 : 4.94147615647

Nearest to be: have, aba, been, was, by, were, are, is,

Nearest to as: agouti, ursus, and, microsite, thibetanus, lanes, in, hbox,

Nearest to eight: six, nine, seven, five, four, three, ursus, zero,

Nearest to between: with, in, under, from, tunes, dr, lactose, gigantopithecus,

Nearest to many: some, several, embarked, these, each, the, dasyprocta, ursus,

Nearest to all: three, any, agouti, abandonment, ursus, two, some, apatosaurus,

Nearest to their: its, his, the, her, pulau, ursus, some, them,

Nearest to of: in, and, omnibus, ursus, six, nine, for, agouti,

Nearest to four: five, six, three, eight, seven, ursus, agouti, nine,

Nearest to they: he, there, it, we, not, who, complicating, you,

Nearest to use: dasyprocta, agouti, operatorname, circ, thibetanus, akita, frau, tribes,

Nearest to system: withdrew, mythologie, microsite, pulau, wort, walther, smooth, forwards,

Nearest to if: where, when, but, dasyprocta, guarantee, is, courts, circ,

Nearest to war: faced, lymphoma, dominicans, ursus, hail, ocean, depart, messengers,

Nearest to nine: eight, six, seven, five, four, zero, ursus, agouti,

Nearest to into: bronx, from, in, leading, senior, for, on, to,

Average loss at step 62000 : 5.00704709506

Average loss at step 64000 : 4.84187094909

Average loss at step 66000 : 4.60680922496

Average loss at step 68000 : 4.98411483812

Average loss at step 70000 : 4.89866234219

Nearest to be: been, have, aba, was, by, were, are, is,

Nearest to as: agouti, ursus, hbox, alain, lanes, thibetanus, microsite, apatosaurus,

Nearest to eight: six, nine, five, seven, four, three, zero, ursus,

Nearest to between: with, under, from, tunes, dr, lactose, gigantopithecus, depressants,

Nearest to many: some, several, these, embarked, various, most, all, each,

Nearest to all: cebus, any, some, agouti, three, many, ursus, abandonment,

Nearest to their: its, his, the, her, them, roshan, some, pulau,

Nearest to of: for, and, omnibus, ursus, circ, thaler, agouti, in,

Nearest to four: six, five, three, eight, seven, two, nine, agouti,

Nearest to they: he, there, we, it, not, you, complicating, who,

Nearest to use: agouti, dasyprocta, operatorname, circ, thibetanus, akita, frau, lamo,

Nearest to system: withdrew, mythologie, mico, microsite, wort, pulau, forwards, smooth,

Nearest to if: when, where, but, mico, dasyprocta, while, guarantee, circ,

Nearest to war: faced, dominicans, lymphoma, hail, ocean, ursus, depart, priscus,

Nearest to nine: eight, six, seven, five, four, ursus, zero, three,

Nearest to into: from, bronx, senior, leading, on, outside, bicameral, through,

Average loss at step 72000 : 4.75267290688

Average loss at step 74000 : 4.81308036649

Average loss at step 76000 : 4.72628171837

Average loss at step 78000 : 4.80983931684

Average loss at step 80000 : 4.77538358676

Nearest to be: been, have, aba, were, was, by, are, is,

Nearest to as: agouti, alain, ursus, hbox, lanes, microsite, aba, thibetanus,

Nearest to eight: nine, six, seven, five, four, zero, three, ursus,

Nearest to between: with, under, from, in, iit, tunes, dr, gigantopithecus,

Nearest to many: some, several, these, various, all, most, other, laws,

Nearest to all: cebus, some, many, any, agouti, three, ursus, two,

Nearest to their: its, his, her, the, ursus, some, roshan, pulau,

Nearest to of: in, ursus, circ, agouti, thaler, nine, omnibus, iit,

Nearest to four: five, six, seven, eight, three, two, zero, nine,

Nearest to they: he, there, we, it, you, not, who, complicating,

Nearest to use: agouti, dasyprocta, fachhochschule, operatorname, akita, thibetanus, frau, circ,

Nearest to system: withdrew, fachhochschule, mythologie, mico, pulau, microsite, wort, smooth,

Nearest to if: when, where, but, mico, dasyprocta, circ, courts, guarantee,

Nearest to war: faced, hail, dominicans, sometime, lymphoma, ocean, depart, messengers,

Nearest to nine: eight, seven, six, five, four, zero, ursus, agouti,

Nearest to into: from, bronx, through, senior, to, escuela, leading, in,

Average loss at step 82000 : 4.77783656156

Average loss at step 84000 : 4.75851355815

Average loss at step 86000 : 4.76541276097

Average loss at step 88000 : 4.74540064681

Average loss at step 90000 : 4.97452762389

Nearest to be: been, have, aba, were, was, by, are, not,

Nearest to as: agouti, alain, ursus, hbox, lanes, by, thibetanus, microsite,

Nearest to eight: seven, nine, five, six, four, three, zero, ursus,

Nearest to between: with, in, under, tunes, iit, from, dr, depressants,

Nearest to many: some, several, these, various, all, most, otimes, laws,

Nearest to all: some, cebus, agouti, any, many, ursus, three, two,

Nearest to their: its, his, the, her, them, ursus, roshan, pulau,

Nearest to of: thaler, ursus, circ, omnibus, six, in, for, agouti,

Nearest to four: five, seven, three, eight, six, two, one, agouti,

Nearest to they: he, there, we, it, you, not, who, complicating,

Nearest to use: agouti, dasyprocta, fachhochschule, akita, operatorname, deserve, thibetanus, circ,

Nearest to system: withdrew, fachhochschule, systems, mico, mythologie, pulau, microsite, ursus,

Nearest to if: when, where, mico, but, dasyprocta, however, while, becomes,

Nearest to war: faced, hail, sometime, dominicans, lymphoma, messengers, depart, ursus,

Nearest to nine: eight, seven, six, five, four, ursus, zero, three,

Nearest to into: from, through, bronx, escuela, leading, senior, in, outside,

Average loss at step 92000 : 4.67485175288

Average loss at step 94000 : 4.73054892468

Average loss at step 96000 : 4.70499224317

Average loss at step 98000 : 4.59549451971

Average loss at step 100000 : 4.70139076459

Nearest to be: been, have, aba, were, is, by, was, are,

Nearest to as: agouti, ursus, alain, thibetanus, microsite, operatorname, lanes, circ,

Nearest to eight: seven, six, nine, five, four, three, zero, ursus,

Nearest to between: with, under, tunes, in, from, iit, dr, lactose,

Nearest to many: some, several, these, various, all, most, other, otimes,

Nearest to all: some, cebus, many, agouti, any, three, ursus, dasyprocta,

Nearest to their: its, his, her, the, some, them, ursus, pulau,

Nearest to of: in, circ, ursus, thaler, agouti, omnibus, including, and,

Nearest to four: five, three, six, seven, eight, two, ursus, agouti,

Nearest to they: he, there, we, it, you, complicating, not, who,

Nearest to use: dasyprocta, agouti, fachhochschule, akita, operatorname, thibetanus, deserve, ursus,

Nearest to system: systems, withdrew, fachhochschule, mico, pulau, mythologie, microsite, ursus,

Nearest to if: when, where, mico, however, while, is, but, dasyprocta,

Nearest to war: stenella, dominicans, faced, hail, messengers, sometime, murchison, lymphoma,

Nearest to nine: eight, seven, six, five, zero, four, ursus, three,

Nearest to into: from, through, bronx, moc, escuela, senior, to, leading,

Please install sklearn, matplotlib, and scipy to show embeddings.

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Average loss at step 0 : 315.634796143

Nearest to be: bogs, aba, thurgood, polo, conquering, effective, zenith, fief,

Nearest to as: tessellations, eldest, er, deprived, operator, broadway, dare, welsh,

Nearest to eight: mamluks, chestnuts, differ, spraying, insensible, sayed, jokingly, demiurge,

Nearest to between: parse, courts, intron, depressants, uzi, introducing, primer, tibeto,

Nearest to many: epistle, gunboats, dependent, validity, embarked, venter, expressiveness, fertilize,

Nearest to all: hazardous, pharmacologic, woo, exaggerate, undergrowth, industrialisation, coasts, carcasses,

Nearest to their: seychelles, equivocal, childish, sachsen, secretary, saucers, assigns, larch,

Nearest to of: gst, hauling, kos, plebiscite, engineer, himmel, collectivist, clermont,

Nearest to four: beep, aldermen, reconcile, rendering, nk, formalism, liabilities, seventies,

Nearest to they: kitchens, soldiery, easier, doth, sasson, vulcan, polydor, munroe,

Nearest to use: exaggeration, grapevine, auc, soloist, bianchi, milo, demesne, morava,

Nearest to system: salary, mythologie, walther, devito, forwards, quartet, wealthier, bolster,

Nearest to if: coals, guarantee, predisposition, hebrews, erratic, rationalistic, trustee, orientations,

Nearest to war: faced, qasim, sometime, orig, ocean, christiern, mongols, imprecise,

Nearest to nine: restricting, lj, melodrama, liquids, rapier, logudorese, turner, portray,

Nearest to into: bronx, creed, shema, ablaze, ferruccio, trailers, sandstone, reestablishment,