RNN

Explain in detail what model you implemented and using what packages. What parameters did you tune? Comment on the poems that your model produced. Does the LSTM successfully learn sentence structure and/or sonnet structure? How does an LSTM compare in poem quality to the HMM? How does it compare in runtime/amount of training data needed to the HMM? Include generated poems using temperatures of 1.5, 0.75, and 0.25 with the following initial 40-character seed: “shall i compare thee to a summer’s day?nn”, and comment on their differences.

with temperature 1.5

shall i compare thee to a summer's day?

The swilt feemovery with with thou mild doth live.

The reefing you alfateng of thy hout plow ceeath,

Fare then my storn make thee seal bald ase,

To me hee what ol thering reat fair,

The bove the endert be in have his reap,

How cap I hatous that sholl al I this every

with temperature 0.75

shall i compare thee to a summer's day?

The swilt feemovery with with thou mild doth live.

The reefing you alfateng of thy hout plow ceeath,

Fare then my storn mate his lease me bese,

Whe hould with with thinksore paiker and hee,

And the timfor whith thy vinge no cruel dost such since,

The hervent five with that shill awer songure,

Nor mi

with temperature 0.25

shall i compare thee to a summer's day?

The swilt feemovery with with thou mild doth lies,

Which is the thing, all had beauty love steat.

With words – without embedding

with temperature 1.5

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now love is thine as he takes from you

then can i see what you with your true

to love your self with keeps love's still

sweet life so much sweet self should from hate

that all i swear yet to death a alone

but him for her and by well i lose thee

those long i'll child for my love not

though i in love loves gracious a common kind

be as thy proud thy self thy constancy

to live thy self thy self i will

make thee a heart even when thy graces

the perfect of my will

a most time jewel out out

now in thee

with temperature 0.75

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now his beauty shall still you for so

and all my best is to this all one

and i an see them with my pen

therefore all my love and from my life hath end

i find sweet love though my love is not

so thou no mother's that i am both

as high to lose my purpose disgrace

till my heart knows all present eye's eye's

and for my love for thee is so fair

that i am not with present nor to be

and he that might i not my love be

as if thou not becoming this nor be

not thee i not yet i am not

with temperature 0.25

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now his beauty shall still you for so

and all my best is to this all one

and i an accessary needs must be

that i will not to be with thee

of him thy self that i do thee more

then worthy i love my self thou dost be

the ten of thine for happier be i whilst

thou gav'st the mother's part i am love

as those gold candles fixed in thee air

lose all of more that i may see

and this true love is love still thee and so so

for love that love i will in thee

by mine eyes thy fair truth wouldst to

With word embedding

temperature: 1.5 , embedding size: 50

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now love is thine as he takes from you

then can i see what you with your true

to love your self with keeps love's still

sweet life so much sweet self should from hate

that all i swear yet to death a alone

but him for her and by well i lose thee

those long i'll child for my love not

though i in love loves gracious a common kind

be as thy proud thy self thy constancy

to live thy self thy self i will

make thee a heart even when thy graces

the perfect of my will

a most time jewel out out

now in thee

temperature: 1 , embedding size: 50

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now love is thine as he takes from you

then can i see what you with your true

to love your self with keeps love's still

sweet life though this nature use doth grow

and yet to be it being with be

that you thy love even keeps to give

that is to outlive long date

when to have eyes of upon

or time doth have a satire of praise

and make make time's spoils despised everywhere

give my love fame faster than time wastes life

so thou prevent'st black save and my part

that i have though not must be hide

like tender old to be i

temperature: 0.75 , embedding size: 50

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now his beauty shall still you for so

and all my best is to this all one

and i an see them with my pen

therefore all my love and from my life hath end

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and for my love for thee is so fair

that i am not with present nor to be

and he that might i not my love be

as if thou not becoming this nor be

not thee i not yet i am not

temperature: 0.25 , embedding size: 50

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

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and this true love is love still thee and so so

for love that love i will in thee

by mine eyes thy fair truth wouldst to

temperature: 1.5 , embedding size: 100

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now love is thine as he takes from you

then can i see what you with your true

to love your self with keeps love's still

sweet life so much sweet self should from hate

that all i swear yet to death a alone

but him for her and by well i lose thee

those long i'll child for my love not

though i in love loves gracious a common kind

be as thy proud thy self thy constancy

to live thy self thy self i will

make thee a heart even when thy graces

the perfect of my will

a most time jewel out out

now in thee

temperature: 1 , embedding size: 100

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now love is thine as he takes from you

then can i see what you with your true

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sweet life though this nature use doth grow

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that you thy love even keeps to give

that is to outlive long date

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and make make time's spoils despised everywhere

give my love fame faster than time wastes life

so thou prevent'st black save and my part

that i have though not must be hide

like tender old to be i

temperature: 0.75 , embedding size: 100

shall i compare thee to a summer's day

that i see on thee which beauty bring

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and make their proud lives of his time

now his beauty shall still you for so

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and i an see them with my pen

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till my heart knows all present eye's eye's

and for my love for thee is so fair

that i am not with present nor to be

and he that might i not my love be

as if thou not becoming this nor be

not thee i not yet i am not

temperature: 0.25 , embedding size: 100

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now his beauty shall still you for so

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and i an accessary needs must be

that i will not to be with thee

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then worthy i love my self thou dost be

the ten of thine for happier be i whilst

thou gav'st the mother's part i am love

as those gold candles fixed in thee air

lose all of more that i may see

and this true love is love still thee and so so

for love that love i will in thee

by mine eyes thy fair truth wouldst to

temperature: 1.5 , embedding size: 200

shall i compare thee to a summer's day

that i see on thee which beauty bring

and in our faults by lies we flattered be

and make their proud lives of his time

now love is thine as he takes from you

then can i see what you with your true

to love your self with keeps love's still

sweet life so much sweet self should from hate

that all i swear yet to death a alone

but him for her and by well i lose thee

those long i'll child for my love not

though i in love loves gracious a common kind

be as thy proud thy self thy constancy

to live thy self thy self i will

make thee a heart even when thy graces

the perfect of my will

a most time jewel out out

now in thee

temperature: 1 , embedding size: 200

shall i compare thee to a summer's day

that i see on thee which beauty bring

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now love is thine as he takes from you

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to love your self with keeps love's still

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and yet to be it being with be

that you thy love even keeps to give

that is to outlive long date

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shall i compare thee to a summer's day

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and i an see them with my pen

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