May 2020

OfficeHours_IS4_20160428_Seg02.pdf

Setting: quiet classroom.
Participants: I1 (black sweater, female), IS4 (maroon sweater), I2 (female, behind camera)

0:00
XXX I1: ok
XXX nice to meet you.
XXX ((both laughs))
XXX um can you say your name again?
XXX IS4: uh
XXX
XXX I1: s- [Su?
XXX IS4: [Sih
XXX Sih (.) wu
XXX I1: [Suh, (.) s- ((both laugh))
XXX [Su↑ (.) wu
XXX IS4: [Sih↑ ((mouths wu))
XXX [yea ((nodding))
XXX I1: [can you spell it?
XXX IS4: uh s i w
XXX I1: s [i (.) w
XXX IS4: [i (.) w
XXX yea
XXX I1: ((mouths o))
XXX and then (.)
XXX how do you spell your last name?
XXX IS4: uh° my last- uh:°
XXX l i u
XXX -,
XXX I1: oh: Yu:
XXX IS4: [yea
XXX I1: [oh (.) ok
XXX ok
XXX my name is Krystal (Aliez)
XXX uh
XXX I'm a freshman
XXX IS4: freshman?
XXX [oh
XXX I1: [yes
XXX the only math class I've taken is AMS102,
XXX IS4: ((nods and laughs slightly))
XXX I1: so that's what
XXX introductory stats, (.1)

XXX and that was like last semester
XXX so:
XXX this- this is going to be a written ((incomprehensible))
XXX right now=
XXX IS4: =oh ok°
XXX I1: um
XXX but I'm a double major in psychology and (.)
XXX Asian and Asian American Studies, (.1)
XXX fun fact I'm learning Japanese
XXX IS4: wow
XXX I1: yea=
XXX IS4: =great
XXX I1: ((laughs))
XXX are you: an undergraduate student? (.1)
XXX [or
XXX IS4: [no
XXX I-I'm graduate
XXX I1: you're- you're a graduate student?
XXX IS4: yea
XXX I1: ((mouths oh))
XXX what-
XXX so you go to a masters school here?
XXX IS4: [uh (no)
XXX I1: [graduate school
XXX you go to a graduate school here?=
XXX IS4: =I'm a PhD
XXX I1: ((puts hands on her cheeks))
XXX ((whispers)) so fancy
XXX IS4: ((smiles))
XXX ((whispers)) oh
XXX ok
XXX IS4: ((both laugh))
XXX I1: what are you studying?
XXX IS4: uh
XXX AMS
XXX applied math and (.) statistics
XXX I1: oh
XXX like what specifically?
XXX IS4: uh
XXX specifically (.1)
XXX computational↑
XXX or like
XXX computational applied math
XXX (just) coding things
XXX I1: [oh ok that's fancy stuff

XXX IS4: [you (.) you- you use computer to: (.)
XXX to solve equations
XXX ((inaudible))
XXX I1: ((nods))
XXX ok=
XXX IS4: =yea
XXX I1: so that's that stuff
XXX IS4: [yea
XXX I1: [ok
XXX ok
XXX now down to the fun stuff
XXX ok
XXX so (.1)
XXX how should I start this,
XXX um:,
XXX so I wanna understand what the (.)
XXX can- can you say this ((points at paper))
XXX I1: yea ((looks at paper))
XXX IS4: Gaussian distribution=
XXX I1: =Gaussian?
XXX IS4: yea:=
XXX I1: =Gaussian↑ (.) distribution?
XXX ((IS4 nods))
XXX but I know it's related to the Central Limit Theorem,
XXX IS4: [ok
XXX I1: [right,
XXX IS4: [y- y- you know
XXX I1: [can you explain the Central Limit Theorem please?
XXX first ((laughs))
XXX IS4: central? (.) I think (.1)
XXX I-I think that Gaussian Distribution is the:
XXX is a <u>fundamental</u> concept
XXX and then it comes to like Central Limits=
XXX I1: oh ok
XXX IS4: so:-
XXX I1: so Gaussian Distribution first
XXX ok
XXX IS4: yea gau- ((reads paper mummering))
XXX I1: if it's easier you can explain this first then
XXX if it (.2) if it's more basic
XXX IS4: oh the Gaussian Distribution (.1)
XXX m:
XXX a probab-
XXX uh: first you should know what a <u>probability</u>
XXX distribution is

XXX it is like (.1)
XXX uh: a pro(.)bability distribution is: (.1)
XXX uh let me see° (.2)
XXX uh it's a probability of all the- all the possible outcomes
XXX (.) [of something
XXX I1: [ok
XXX ((nods))
XXX IS4: uh:
XXX for example if y- if you toss a coin (.)
XXX I1: [mhm
XXX IS4: [it will be head or tail
XXX I1: ((nods))
XXX IS4: and the:n the: (.)
XXX th- they will assume that the coin is (.) uh
XXX is even
XXX I1: [mhm ((nodding))
XXX IS4: [and uh
XXX it uh-
XXX .hhh
3:00
XXX and the:
XXX the probability to be: head is (.) one over two- half
XXX one half
XXX and the probability be:
XXX uh: (.1) tail
XXX it's (.) also (.) one half°
XXX I1: [mhm
XXX IS4: [and we can see that the distribution of the- of the- of
XXX this (.) this event
XXX uh:
XXX tossing a coin (.)
XXX is one half one half
XXX I1: ((nods)) ok=
XXX IS4: =this is distribution
XXX and the Gau- Gaussian distribution is (.)
XXX is bac- is basically the same
XXX it is just the number is different
XXX but (.) but it is (.) also a distribution
XXX you can: (.) uh (.)
XXX you do something and
XXX the different outcomes (.) have different probabilities
XXX and Gaussian Distribution is very (.)
XXX .hhh is a- is the most common distribution that (.) you can
XXX see in a (nature)
XXX I1: ((mouthes o))

XXX [can I get an example
XXX IS4: [like- like the:
XXX height distr- height
XXX I1: [mhm
XXX IS4: [the: height of a person
XXX (.1)
EXC uh:
EXC for example like
EXC uh: if-
EXC uh:
EXC in human beings like- like
EXC uh:
EXC one (.) one point↑ sevent- for example°
XXX one point seventy five↑ (.2) meters,
XXX I1: [ok
XXX IS4: [is the-
XXX i- i- i- is the most possible height for man,
XXX and then one point seven five↑
XXX and one point seven six will be a little (.1) s-
XXX uh: will have a little smaller number
XXX I1: ((nods)) mhm
EXC IS4: and then, (.1)
EXC point seventy- point seventy:
EXC one point seventy (.) three
EXC and one point seventy (.2)
EXC uh::
EXC ((mouths words))
EXC seventy
EXC h- h- have a-°
EXC a smaller number than: (.) than both
EXC and you will get (.)
EXC I think
EXC ((looks around for something))
EXC uh
EXC can I- can I draw a picture?
XXX I1: ((looks at I2 behind camera))
XXX can we (.) draw on this,= ((holding paper up))
XXX I2: =yea (.) sure
XXX IS4: [ok
XXX I1: [ok
XXX you can draw on this ((places paper back down))
XXX IS4: you will find (.) the distribution will become (.) this way
XXX ((draws curve on paper))
XXX I1: mhm
XXX IS4: so

XXX the probability to be like (.)
XXX one point (.1) will be the most probab-
XXX uh:
XXX possible things
XXX [so
XXX I1: [because it's average?
XXX IS4: yea
XXX it- maybe it's average yea
XXX I1: [ok
XXX IS4: [so
XXX it's something:
XXX yea
XXX it's average (.) and
XXX and the other
XXX the other middles
XXX the other parts will be a:
XXX a smaller (.) possibility
XXX and then (.) and of course (.) this
XXX if- if- if a man is like (.) one point one meters
XXX or like
XXX one point (.) four: meters
XXX it will be-
XXX (.2) there will be a very small (.)
XXX probability for:
XXX I1: mhm=
EXC IS4: =f-for another to be in th-
EXC in: in this (cut)
EXC so
EXC th- the Gaussian distribution is a- is a distribution to (.)
EXC describe this kind of (.)
EXC this kind of things
EXC it- it gives you a:
EXC it gives you a probability of-
EXC of a: of an- an event
XXX I1: ((nods)) mhm
XXX IS4: so:
XXX and you can draw picture of this
XXX I1: [ok
XXX IS4: [it is a Gaussian Distribution=
XXX I1: so:
XXX events (.) with probabilities that can be: (.)
XXX illustrated↑ with this?
XXX IS4: yea [yea
XXX I1: [kind of graph is what you call something with a

XXX Gaussian (.)
XXX [Distribution?
XXX IS4: [yea ((nods))
XXX Gaussian Distribution
XXX I1: ((whispers)) math
XXX wow
6:00
XXX ((chuckles))
XXX IS4: ((smiles))
XXX I1: ok ok
XXX that's- that's like the basic (.) concept?
XXX [right?
XXX IS4: [((nods)) yea
XXX IS4: yea
XXX IS4: m: so
XXX in (.) >Gaussian Distribution is important because l-<
XXX it can be seen in:
XXX in (nature very) (.)
XXX very different aspects ((incomprehensible))
XXX and
XXX ((flips paper to read something)
XXX so: the Central Limit Theorem (.1)
XXX that means: (.1)
XXX that is (.) another amazing theorem
XXX because
XXX uh
XXX you know,
XXX different things have different distributions
EXC but if you do-
EXC if you do a (.1) uh let me see
EXC how to put this
EXC ((mummering to himself))
EXC ((pause as he thinks))
EXC uh:
EXC ((pause))
EXC yea (.2)
EXC so
EXC (.3)
EXC ((preparing pen and paper))
EXC there are some things that are (.) that- that are nor-
EXC that are not-
EXC uh
EXC obe- obeying the Gaussian-
XXX ((looks off camera distracted, I1 looks too))
XXX ((turns back))

XXX uh:
XXX Gaussian Distribution
XXX and
XXX ((flips over paper, pauses, looks back up in previous
XXX direction))
XXX ((cut off))