## How to ace interviews (MFE Master's Program)

#### January 1, 2023

#### 0 About Me

- Currently Master's in Financial Engineering @ Columbia University.
- Got the offer from Baruch MFE and CMU MSCF; (Reasonably) rejected by Princeton MFin
- DO NOT JUDGE MY PECULIAR CHOICE. It's a long story.

#### 1 Housing-Keeping Stuff

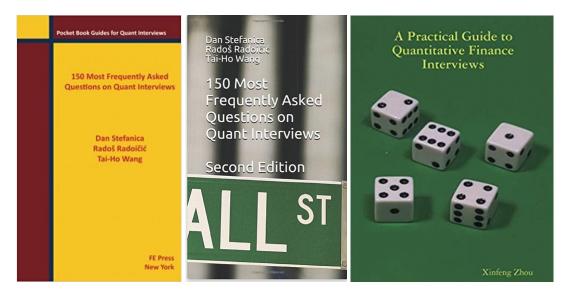
- Motivation: Yes, there could be interviews that await you. At least true for Baruch (Mostly technical), CMU (No-brainer behavioral), and Princeton (behavioral and alumni).
- Timeline: When you should be expecting an interview
- DISCLAIMER: This sharing is for educational but not informational purposes. I cannot guarantee the integrity and validity of the information I provide here, nor will I bear any responsibility.

#### 2 Info Search

- 1p3a: THE top choice
- Glassdoor/Quantnet: Could be useful, but mostly outdated information
- Blind when you are professionally mature
- Ask: If you have connections, use them; if you don't, build them.

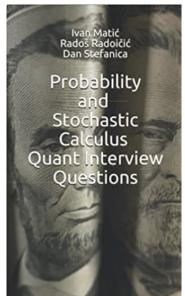
#### 3 Tech Interview

- Hard stuff:
  - Search info first to see if your interview is gonna be technical. If you aim for Baruch, you better be prepared.
  - Ask yourself have you known everything in 150 Most Frequently Asked Questions on Quant Interviews & A Practical Guide To Quantitative Finance Interviews (& Possibly Heard on the street)



 Good coverage is KING. If you have extra energy and time, dig deeper into probability.

X,Y~i.i.d U(0,1), pdf of X+Y



- Leetcode questions are starting to show up, but do not overprepare. Weekly contests should become your routine (probably after applying to grad school); OOP
- Finance stuff: Explain put-call parity, Greeks, arbitrage opportunity or not, binomial tree/BSM.
- How I prepared: "Cheatsheet" (don't cheat). Go through everything.

Random Wallk:	irreducible. all states communicate w/ each	せのいちみ IP( sup W(い) > a)=2[P(W(+) > a)	OST40 (1) T=小f{+: X+= 6 > 0]	$\int \overline{A} I h \cdot \int \overline{A} \cdot \int \frac{dS_1}{S_1} = \int \int dS_1 S_1 + \frac{a^2}{2} dt = bS_1 \cdot bS_1 \cdot \frac{b}{2} T$	133頁, 422時
Setting, why p 60 ARD#+1, Why if=1-760 pmb-1	This, After - A class = 2011 null recurr/pos pecur/ +1005 - After W: Directicle ( +/- drift, all pronscion O drift : all Null recurred	Verity: E[TA]= Store the tre the de (an Hell	hor界 M <o <0<="" e[t]="=" ini="" ost="{A+3" td=""><td>R(1) (p-E) T++BT= V(++)++ S=500 V7++BT</td><td><math display="block">\frac{\Delta S_{4}}{1+\gamma} + (g_{-\Delta S}) = \frac{S_{-}}{(+\gamma)} \cdot Q \qquad \sqrt{4\beta_{2}}</math></td></o>	R(1) (p-E) T++BT= V(++)++ S=500 V7++BT	$\frac{\Delta S_{4}}{1+\gamma} + (g_{-\Delta S}) = \frac{S_{-}}{(+\gamma)} \cdot Q \qquad \sqrt{4\beta_{2}}$
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denote: 12 (poo 10 in macrical), 1-12 : 1000 paro	Period 2: 12mb (ref to 3 or 21-1 stren) - n ly dir 1,2"	2 品」、「古 e # 4 2 品」、 豊 e * =100 - 告 3-=	B-12 (1) T= (n) [t: B1 = - a]	N 6 M	(1-9)) + Co-2)= +++ (-(1-9))
$P_{i} = \sqrt{P_{i+1} + (P_{i+1})} = \sqrt{P(P_{i+1}, P_{i})} = \frac{P(P_{i+1}, P_{i})}{P(P_{i+1}, P_{i+1})}$	limit data = gleady data in irreducible, openind's, positie	BM to 2. mult recomment.	OST=>{B+}=>E[BT]=0, &p-a=0	$ \frac{1}{11} \frac{1}{10} $	We want fq +f(1-q) = f
dunote: P= } 22 10 3 Pi+1-Pi= PiPi	recurrent (empdic them, RW REAAS)	BM AE 2. Mult recourses? ZX: Mt1 = max Bs Mr increasing out, Mis o 05555			W/: ASM 2+ ASM (1-1) = AS
Pi-Pi-1= Pi-P, B-Pi= (P,=) Pi-Pi=(PiPi-Pi) Pi	Si=1-12-21 BARW & period 2	P(M+>a)=P(Tact)=之豆(音)开盘之5bar.	a what he has a been it under in the report	194 B-14273: Y=e <sup>2</sup> , 149, normal, 8, PS1. \$ bigined	and the all a second
$\Rightarrow P_{1} = (1 + 1 + 1 + 1 + 2^{-1}) P_{1} = \frac{1 - P_{1}}{1 - 2} P_{1} = \frac{1 - P_{1}}{1 - 2} P_{1} = \frac{1 - P_{1}}{1 - 2} P_{1}$	ergedic:	edition a since and on the list complement of cold of Ta	EXTAE < as (uniform integrability)	RA(20) = Yt+ + & ~ N(Vt, J2)	$= \sum_{u=d}^{n} \left[ f = \frac{3 \cdot 1 \cdot f_u(1-q)}{\mu \cdot \alpha} \right]$
	(1) long num ang TE: [TE1=1; T=TP To >0, UjeS, Unique	AF + (M+ 5, Jac and - 4 + 4 and 1 + 1 P(T_{A <t})·2重(素) <="" a)="2車(素)&lt;/td" p(m+="" →=""><td>-nSufficient and not - a &lt; XTAt Sb</td><td>Rick: Newtonl Periode: CT deantes Call price to u</td><td></td></t})·2重(素)>	-nSufficient and not - a < XTAt Sb	Rick: Newtonl Periode: CT deantes Call price to u	
南子進青常小年:Po=0,Pu=1=>1=1-1-1-1-PA:=>Pi:1-P	Li >0, UJES, Unique	have	TAt: before the game stop, it is bounded.	(r=e""E[(sr-k)"] risk free vale	fact: BM is a Gaussian Proc: (B1, Plm) Junit
Rel: Pizz Inpr	Ui) Pij -> Tj Vies frit &	Clan. Mt ▲  B1  Vi∈[0,t~) (1×1>a ≥(1×a) U(x-a)	1-side problem: frizz- 130% (123-00)	As replace all ubor , V by V- 5	Bo= 0, B1= 10, 21, B1 10, 21+10, -11. 2.
<u> </u>	ET-1- T I I I I we return		- martin June - 130 1 122 - 000	(1, THAN ( MALT , FIL)	Bin No. 2+ Thinks + Nutur 2n (id. N(n)) dra Quarris Marka Man 10, Cravince = S. N. R. R.
8- Pp function " ba	E [Tj]= x; : Tj: normal time) between rotures	MG: O E[X+  Fs] = Xs User, Fs; poot com	Sto's calculus: (db1) = dt, db1=Btedt=bt	Ele 1t - my	
$\alpha_{n}$ ; $b = N - i \Rightarrow P_b(z = P_i) = \frac{1 - P_i}{1 - P_i + b}$ (hitble given)	Dew o drift (Elreturn time]: as	E[[[x,1]]; €[x,], &PEX1: EY, & V+.5(ALCHING Markall O [. 197] - [[1] X1: 2X, X1: 2	RP(AX)= at, ideal Riz R desource	E[Sr-K]+: E[S-K)((ST-K)]	(A) X= tB(t) te(0,1] & BM. O MORD UDDINGET, GV(XE,XS)=E[XSXE]=EXEKE
ruin probi 1-p- fa- faith ( ) (11 - 14-D)	M I M d M L M A			*** C(ST 21(ST >k)] - k(P(ST >k)	Proph o uprime t, and (XE, XG) = [E] XGXE ]-DETERE
You'll prob: $ -P_b-\frac{p_a-p_{a+b}}{1-p_{a+b}}(:=P_{-a})$ (hit - a lefter)	# ergodic MC, to first return time(T)	K市MG; [313, E[B+175]:10[B+135+B5]B5]= B5	FE(444)")=E[(AF. Z)"]=E[AF.Z]=AFEZ"= AF	DP(ST>K)=P(Q-ST>INK)=p(M+12>4K)	=St KE[B(2)]=St. (2V5)=SAL
Rely formulately: RW So:= 0. S. XIXX+ Xn	inbuttion ONT >0, Th) ECT j J = to <00, Re	B(+)-+ ) V Marmingale stopping thm:/Optimal stopping thm	$\mathbb{E}(4t^{1})_{2}$ : $\Lambda(\eta, S_{r}) : \gamma_{t}, \Lambda(s_{r}) : \eta_{1} \widetilde{\mathbb{E}}_{\lambda}^{-1} \widetilde{\mathbb{E}}(s_{r})$ : $\eta_{r}$	= \$ (Ak-m) (tail of stondard norm)	t=obt, take limit Dun + B(t)= Lim +B(u)
Xi jia +1 u.p. p & -1 w.p. 9=1-p	positive recurr + + + + + + + + + + + + + + + + + +	T=inf{+: B+=- + or b} Qib>0 EXT= EX.	charrie: d(B1= Brids- 11= B++ dB m2- 8+	dente: $-d_2 = \frac{e_1 k - m}{\gamma} p(c_r > k) = \overline{p}(d_1)$	$= \lim_{n \to \infty} B(n) - B(n) + B(n) - $
hotice (So) is a DTMC with S= { = , ±1, ±2 }	Desitive receives to a steen with 3: [1- Con 0: ]] () involutible [ + + + 0] steen with 3: [1- Con 0: ]] () involutible [ + + + 0] steen with 3: [1- Con 0: ]] () for the steen s	GR: PL= A (Cambler Run) E[T]= eb (i(N-1))	=25+dB++(d5+)=25+dB++d+	O HELST - 1(ST>K)] & Jurial Sum	
	(1) depends on Mittini cond. (ii) 7 hold	OST: ELBY = ELBY = 0, where BY= { b up Pb	ABA by the chain rule Quadantic Visibles dt ~ at : II ~ 00 if dt ~0	Wheref C-1-COMI C-ri	Brownian Bridge: YE: - [Be (BI: D) for & E[0]]
Acomphetic: D a -> co, R.) Py = prob every /eventually reach b	T = + D = mittal cond, (11) Z hold	D - A(L-PA)+LPL= A = PL= -	at ~ at : II -> 00 if at >0	E(Sr 1 (Sr7K) , tr (entresident	OV.c. hun you follow!
( 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	[][][] 还是硪[[12],13], () ((i)×	「132号のST:110[11-7-7]コロロロ目でのでして了正在(11-72)はRyal	Taylor: f(1/e+k/e)=f(1/e+f(1/e)+k/e+3_2(AKe)+	(2150 25 D) (x )x>-d2	(1) 146 disminuter (10005) Yt~N(0,+,+(1.t))=N(0,+(1.t))
a) $(=1+3, P_0 = \frac{\alpha}{\alpha+3}, P_0 ]  \alpha \to \infty, P_0 \to 0$		And hand do had a shake	ation), f'04,)+iti"(04) dX4	(3)3(p(2))(E)) mtn 2 > (2) (2) - (2))	COV(YS,YI) 些 ELYS HJ= ELBS BL H=0]
$\begin{array}{cccc} p_{<1}(p_{>1})y_1, p_{>>1} \\ p_{>1}y_2 & km & \frac{1-p_{*}}{p_{*}} \\ p_{>1}y_2 & km & \frac{1-p_{*}}{p_{*}} \\ p_{>1}y_2 & km & \frac{1-p_{*}}{p_{*}} \\ p_{>1}y_2 & p_{>1}y_2 \\ p_{>1}y_2 \\ p_{>1}y_2 \\ p_{>1}y_2 \\ p_{>1}y_2 & $	privad 2 violate 2 July to limit [ 1 0] Trunival (1, Tritit) (bong nu ava	demend rate X > prod rate C	$rac{d}{dt}$ chain rule: $df(x_t) = f'(x_t)d(x_t) = \int \frac{df(x_t)}{dx_t} = f'(x_t)$	$= \underbrace{e^{\mathbf{w} \cdot \mathbf{t}^{2}}}_{h \to \mathbf{x}} \int e^{-\underbrace{(\mathbf{x}^{-1} \mathbf{t}^{2})}_{\mathbf{x}^{-1}} d_{\mathbf{x}}} = e^{\mathbf{w} \cdot \mathbf{t}^{2}} P(q \cdot \mathbf{z} \cdot \mathbf{d} \mathbf{z})$	\$42: O E[B+1B5]=B5 (post => MG)
() 1 m Lim (-1 + 200 - 10 + 10 - 10 - 10 - 10 - 10 - 10 -	Monorel , M= LBIE ( Ongran ang	Nest derand : (X-C) ++ + + + + + + + + + + + + + + + + +	The's formula	= ent = \$ (1+4) : E[St] . \$ (4)	Ø1E[B\$18]= ≥B+ (Future=Roda)
P = (P=1) P = (P	BM (BE, + 20) Poisson NLt) B(0)=0 N(0)=0,		\$2: df(By)=f(B+)db++==f(B+)d+	100ms E(S=)- (2[0M+1]2] = PM+1	By tower property: E[BSBt]
	Star, ind, increment Std. ind. inc.	T= ING {+: X1=6}, while [, Vind]) EDG b	df(x+)=f'(x+)ax++=f'(x+) e2d+	$\begin{array}{l} k \otimes \mathcal{A} \in (S_T) = \mathbb{E}\left[e^{m \cdot t^2}\right] = e^{m \cdot t^2}\\ \therefore C_{T : e^{-t^2}} \mathbb{E}\left[\left(S_T : k\right)^{\frac{1}{2}}\right] = e^{-t \cdot t}\left[e^{m \cdot t^2}\widehat{\Phi}(d_1) - k\widehat{\Phi}(d_1)\right] \end{array}$	E[A,E[A,IA]]=E[\$A]=}.+=S
(P = e(a) P > 1 (P < P) ( $P < P$ )	BL+)~Nlose), NU)~Poisson(At)	OST->B+ FE[B+]=FE[X+-pT]=O=>ELT=	= f'(x) ( , d++ = d B+ ) + 2 f' (X+) = dt	= [, @(d,) - Ke" (du), [1) \$ See" = E[ST]	
+/o drift; hit any pushe hit w.p. 1, any may int wp.(e,1)	Normal: ((X)= trep[.3] By: tre [ x (Warp(Bex)]	05T>[6+24] E[B+2]= E[T]= == == [(X_1-C_1)]= ==	这里可以由XI= M++0B+=>dX1= pd++ndl+		E[BLB+'Bu] = E[E[BSA'BulB+']]
5/0 drift: hit & smekuck : need bip \$ 60, pob \$ 1, @\$1.21	N(r1) \$\$ \$\$ \$\$ \$\$ P(X = x) = P(n = 2x) = 2(1 = 2) \$\$	$ = \oplus \mathbb{E}\left[1 - \frac{1}{7}\right]_{2} \stackrel{\text{pr}}{\longrightarrow} = \Lambda(L)  \left(\frac{1}{7}\right]_{2} \stackrel{\text{pr}}{\longrightarrow} = \Lambda(L)  \left(\frac{1}{7}\right)$		C-P=So-ke"T=>P,ke"T-S+C	= [[ ] + [[ ] 5 ] + [] + [] + [] + [] + [
2 return pub : start with any state is prob of ever	11(10)110001-2(子)	· (() = ) = = () () () ()	$df(t, X_{t}) = \frac{df}{2t}dt + \frac{2t}{2X_{t}}dX_{t} + \frac{1}{2}\frac{a^{2}f}{2X_{t}}(dX_{t})^{2}$		$= E[h_{t_1}^{1}, \xi_{B_1}, h_{t_1}] = \xi_{e}[h_{t_1}^{1}, \xi_{t_1}^{1}, \xi_{t_2}^{1}]$ = 3(+
100m to 1(1= Fi) is (0,1) under + 8 - dri(+	All Dissipation of A MA -	BM w/ drift: pt+ 6Bt	1312: St=eXt, Xt= Ut+08+	Yeplace Oft, TET-+ ((t,St)	
デ=1 under zero drift, 即区文 drift 不幸送, O drift 客之台	$\Pr_{\mathbf{r}} \stackrel{\text{post}}{\to} \mathbf{r} \stackrel{\text{post}}{\to} \mathbf{f}_{1}(\mathbf{x}) : \pm \left(\varphi(\underline{z}), \overline{f}_{1}(\mathbf{x}): \overline{\varphi}(\underline{z})\right)$	T:= infit: Xi= Mt+ oBi Rit - a mb]	$d_{S+z} S_{*} e^{\nu t_{t} \sigma_{Bt}} \left[ \left( \frac{\nu t_{s}^{2}}{2} \right) d_{t} + \sigma d_{s} d_{t} \right]$	Sensitive analysis:	~ E[B, E[B,  B+, B,=0]   B,=0]
Transcient & record status (Markov property)	Joint density: P( \$5: x B+: y)= P(B5: x B+= 5;=yx)	31×F-介Martingale: E[e <sup>BB+·iot</sup> ] for 日この	st= see [[Dt])atteast]	△ 1======: Stp(d1): Ker((-1))p(d1)	
(miscrit & receive subtry (provide property encodes back again (Records)		13- M2(+)=1E[e2+]= e3+ by Mount GF,	dy Sur In	$\Delta = \frac{2c}{3\zeta_1} = \overline{\underline{0}}(d_1)(\delta_{(h)})  \forall z = \frac{\delta_{(h)}}{3\zeta_1} = \frac{\frac{\delta_{(h)}}{\delta_{(h)}}}{S_1 + \delta_{(h)}}$	Jizzapindition on Bizo, be take witste 2-
1 Mar Br. J. S. M. Jacob, J. Grade Mr. H. M. el David	W. (WULDS(BL)= (N(B)-L+1, R.)-SACAL	ing i tech i Ele je en joinen al.	dst : pd++rdb+, where p=V+2	(1) = 34 = 5, (1) 34 - + (2 - (-1)) (1) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - + (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) - (2 - (-1)) (1) (1) -	=E[B(E[BS[B2] B1:0]
LURA EET; ] < 00, Tj to in beween network. The discout Ti continony LURA EET; ] < 00, Tj to in beween network. The discout Ti continony	Sittle ON (N(S), M(H)) = X(S / H)	$h_{0}: \mathbb{E}\left[e^{ab_{T}}\right] = \mathbb{E}\left[e^{a\overline{b}\cdot\delta}\right] = \mathbb{E}\left[e^{a\overline{b}\cdot\delta}\right]$	导是risk pioning、剧tounderlying有risk、鼓	st sife is at -rice an glas-ke the day	given present, Partiss prime (Abb
WRECTI = w, BI null recurrent it + time discreet, Tj continons	convitional distric Billistic b for set	27. EZ: 1, EZ . 3, EZ = 15	马山江(高)(常用传话:)	$= \frac{eS_1\phi(d_1)}{2\sqrt{r-t}} - rke^{-n(r-t)} \oint(d_2) < 0$	= E[B+ { B+  B1=0]= } = E[B+2  B1=0]
>+/- dift: Sig away # of returns a geom(1-5) Transient	(and, density $P(b_{1}, \gamma, b_{1}, b) \propto f_{5}(x) f_{4-5}(b \cdot x)$	(RAN(C - [. K) [d'My(1)]	Shophyter (Spillision)	V-25-54(d) -re "(1-1)2d = 54 4(d) 5-1-X	$= \frac{5}{4} (Var + E^{2}) - \frac{5}{4} (o^{2} + \frac{4}{4} (1-4)) = 5(1-4)$
1/- out : 3 and 1 - 1 - 3 - Jeon 1 - 1		(RAMGF: E[x")=[d"Mx(1)]+=0	ESt= E[Soentran]= Soentrat = Soentrat	1 30-34 (all)38-10 30-34 (all)MITAX 就White 19年1,+11 何位し	BE1B1=0 22 NGO 11-E1)
9 (メ=ド): (1-9)*"ア、EX-言, VO():デ, 即前に1次5: 500,東前20	$\frac{1}{2} \frac{1}{2} \frac{1}$	[" L & M(8(t)) E [ett]	again, M>V because of risk promision.	- 124.12 -	住住: 特Brownian Bridge 書衣 MG
(3): Grambler Ruin: T. white n: Q=- R or 6] stopping time , KFE[[]]	$-\frac{\frac{1}{2}}{2}\frac{1}{2}$	(完养: [[[e <sup>68+-数</sup> ]]];]= e <sup>681-2</sup> (Br: Br 611)	METATE of return (=) 5 expectation & DR	l gield => bund price ( + welco) optimprat	X(t)=(t+1)Y(計) =0
$T: m_{1} \in 1: S_{n} = A = b = (1 - p^{n})/(1 - p^{n+1})$	Vorme Top + 5	\$19, E(e" + "): e" + "			(AV(X4, X5)= E[X(c)X(+)]=E[X5+76(K2)]
To which its sum and stype of the first stype of the sty	Ports for: N(5)   N(+): + ~ Biron (n, 5) (E: n f		on apply Ito's formula to fitial) = She Vitial	3.3 pricing: O price Forward	
△ECT]= [ ab fr (= 1 m p=1 - 1 [ byb- a(1-14)] (≠1	·····································	A GBM: Yt:= ext where Xer pt++Bt	#= t'n #= fre' #= ter	F=e"TELST-K] F=C-P	=0+1)(++1)E[Y(资)Y(前)]: S
1+1 [696-AC1-P4] (+1	君は: BM LGoussian Stices (iid ~N(o,dt))の年	E(J); e M+ 52 +/2, & NO.		$F = e^{-rT} (S_0 e^{rT} - k) = Q_{0} - k e^{-rT}$	Y(+)~ NVmal, FR. t-st/(t+1) Conson
お針塾は: T= T₂∧ T~。	So=0, Sn=X1+ Xi 110 21 4. P. 3	ender the ender and how and how as	dSt=St(0gf+eqBt)+\$2t(egqt)∧	Making use of RE[ST] = SverT	Chosenium stices to For & Gaussiam. K4312 Connection 8:~
and an a shire Stational 1	Bay: dt 2 + => n= + for dixed ( we have	6	\$P.50: f(t, B+)= f(r, o)+ 5t f((s, Bo)) as	- 12 - 7 = 0=> So= ke-1	(Bt3-3+Bt) is MG
() negative double Pol. to positive mass apas to inf )	dX(X+Yn) DTMCGtimeunit:1, BM timewil Edt	asm& - Martingale !			FT()1952): B5-35B5
LEFT. T IN - RIMF[T]	step lenge 11 1/2/2411/2/2000 Br	TO 31 BM W/ drigt Shitting time:	$+\int_{0}^{+} f_{x}'(s, b_{s}) db_{s} + \frac{1}{2} \int_{0}^{+} f_{xx}''(s, b_{s}) ds$	Oprice  ST-K  = C+P	E[ ] 1975] = B5-3-35B5 (marrie 275: 000-006/2 MGF of Narral. entr5020
(a) pus drift: I (a) (drift: 1 ~ 4		$T = \inf_{t \in X} \inf_{x = \mu} t_{t} \delta b_{t} \cdot a_{\alpha r} \delta_{1} \cdot (T - \alpha) \Lambda(T_{b})$	Ito formulato >2 A:	() prize (ST-1c) <sup>2</sup> ? () [[[*]], E[[***]] = (***2)	MGF of Normal entry
transumi: -12(012 pridape, -17212 (5.21 mot)	現え、: dx~,从+、 オメ/ d+ ~ /	OST -> expMG: (Eexp(+BT-2))=1	Jt df(Br)= Jt f'(Br) dBr + ± J f'(Br) dt	( ) E[ex], E[ **** ] = e^{At2}	g(0;t·x)= e <sup>PX-052</sup> (x→A+) (expMG)
transment. Atomorphic field by	Mam: dx . hE[Xi]= 0, Wr=(dx). nV(xi);(dx) = 1		01 10	(P) E[et], E[ """] = e^{Atz} (Atz = Sters YL: Se(A-T))+++BL = Se(A-T)+++BL ALL	Q(0)= Q(0×0;X,2)=
Zero drift numer/ Will 32 10 2 Northa Expectation 300	Forby LLN, add up a lot of render ild of Revenal	$= \operatorname{IE} \exp \left[ \theta \left( \frac{X_{1} + T}{T} \right) - \frac{\theta^{2}}{T} \right]$	V Monthquie mormal netge	= Soe (A-T-E)E+VB+	$g^{2}(\mathbf{e}) = g^{2}(\mathbf{x} - \mathbf{\theta}_{\mathbf{b}}) _{\mathbf{\theta} = 0} = \mathbf{x}$
* Commicates:	Hirting time (stypping time) who a >0 hup/art losint s)		· · · · ·	diffy,=(n-r) +++ od B1 -> Yt > MG.	$q_{1}^{u}(0): q_{1}(0) (x_{-\theta+1} + q_{10})(-t)  _{\theta:0} = \lambda^{-t}$
	$T_{\alpha} := \inf \{t, b_i = a\} ((\underline{b} \underline{L} \underline{a}) + f a \neq oncountable)$	Ry (Eexp (€XT)=1, where o ==== √	Tto (K) & weighted sum of Gaussian/Americada		<u>9</u> 代の): g",(X,01,23,9(-1)(0=1, = X3-3+X 可以使用5所MG+++ CV(T, BT)
ango dic: 112; 33(42; ( do dool h stochastic)	$(m \leq 3n \leq p(R_1 > \epsilon) \xrightarrow{t_0 \leq n \leq 1} \overline{p(R_1 > n \mid T_0 \leq \epsilon)} P(T_0 \leq t)$	e= PL+p=+(1-Pb)=1	(3): [ B, B, FixEx, for tx f'(x)=1	9 Su MIFS: 5. MMMT Ju/ Ed. S. P. Sui(K-Su)t Fd: (K-Sa)t	TEINFS4:131=-a/b3_100
	+ P(Bt > a To >1) P(TA >t) 4 4 ( ( at )	-> P 1 1- P. I-EFA	1. ±B1-0=E+±T=>S[6268+=±187-T),	"I Su replicite: Ashiner of stock,	CW(T, Br)= E[TBr]-E1(B)=7
O 255 communicate: 注 i co 根腔加和制 Communicate & equivalence / class property ica ica ica edit	$\begin{array}{c} & & & & \\ & & & & \\ & & & & \\ & & & & $	=> $P_{b} = \frac{1 - e^{-\frac{\pi}{2} + a}}{e^{\frac{\pi}{2} + a} - e^{-\frac{\pi}{2} + a}} = \frac{1 - e^{\frac{\pi}{2} + a}}{1 - e^{\frac{\pi}{2} + (a+b)}}$	1 \$By-0=2+\$1 =>3,82854=2189-73, Whinh is the variance MG.	· (f-DS) in cash, value of purific	
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(B) (B) threshold/recorrect + & date grand).	The rel ( + + ) = P( + + + - >a); p( + > +) = = = = = = = = = = = = = = = = = =	NUMP 10 2 2 1 40 100 Errs E	$F = \frac{f_{u-q} + f_{u}(u-q)}{r}$	(2) (1+1) (f-05) - f. () (1- f. )	
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	asyption P(Tareno)=1, EE[Ta]= ==	2/1 ET ~ 1 OST => [B1]=> 1E[ XT-1]= O => ET= EXT.	A	[ [->*, w, i <> -> . 3r ]	I j

- Soft stuff
  - Silently solving the problem is a no-no.
  - Navigator interviewers through how you want to formulate the problem, assumptions you are making, and thinking process speak your mind!
  - Quickly adjust to comments
  - Do now be daunted if you cannot get to the final result. After all, you have proved your ability to think like a quant. (If you've done what I've said)

### 4 Resume Questions

- Ask yourself: Are you sure you're familiar with everything you put on your resume?
- Then ask again, vigorously
- Introducing: the STAR method (Let's google this together)
- What makes a good Resume? Search for it on 1p3a or stay tuned for more sharing from HFA
- Try Latex, it's awesome! (Clean, tidy, and supports version control with Git) <u>https://www.overleaf.com/latex/templates?q=resume</u>
- Google for resume books:

- https://math.nyu.edu/media/mathfin/class/2023/resume\_book\_2023.pdf
- Princeton used to publish their resume book but I did not find it.

#### 5 Last Part, Fun Part: Behavioral

- Could be a sanity check, but could also be your last chance to impress.
- Give me a reason not to forget about you after the interview, BY ALL MEANS. Get your own niche. Most people hate mediocrity. At least I do.
- Once again, engage in the conversation. Do not spill it all out. Gently leave space for follow-up questions.
- A pickle jar

#### You think that's it? Think twice

- Interviews are your chance to build up a more informative and dynamic portfolio of yourself. Grasp it and think about what additional aspects of yours you really want your dream school to learn about.
- For those CS students: You can unintentionally bring up and brag about your GitHub page. Make sure your projects are well documented, and codes are clearly commented on so that you won't be backfired
- Be "LinkedIn" ready (make sure it's in English), and get your own handle: <u>https://www.linkedin.com/in/jiangteng/</u>
- Last but not least... (For real this time)

# GOOD LUCK! I'll open the floor for questions.