

Mining the Miracle Machine

Sample Chapter · Part I, Chapter 1 · Dr. Mohammad Shehata

Maya

CHAPTER ONE

Are You Still Hiring Humans?

The billboard caught me at the bottom of the ramp, right where the 101 spills you into the city and the light goes flat and silver off the bay. It was one of those digital ones that change every eight seconds, and it changed just as I looked up.

ARE YOU STILL HIRING HUMANS?

White letters. Black field. No logo I could see until the last second — some little wordmark in the corner, a company that made hiring software, the kind of thing that sorts a thousand résumés before a person reads one. Then it flipped to a stock photo of a woman smiling at a laptop, and then to a car insurance ad, and then it was just a billboard again, the way a knife is just a piece of metal after it's back in the drawer.

I had my coffee between my knees. I remember that because I gripped the wheel with both hands like the road had done something, and the coffee tipped and I felt the warmth bleed through my slacks, and I said a word my mother wouldn't have liked, out loud, alone, at 6:52 in the morning.

I thought of Nadia. That was the thing. Not myself, not yet. My sister, twenty-two, three months out of a good school with a good degree and a GPA she'd bled for, sitting at our mother's old kitchen table with her laptop open to a job board, refreshing. Two hundred applications. That was the number the week before. Two hundred applications and not one human being had written her back. Not a no. Not a thanks for your interest. Nothing. Two hundred letters into a well, and not even the sound of them hitting the bottom.

Are you still hiring humans?

The light changed. I drove into the city.

The garage under our building is nine floors of concrete going down, and I always parked on four because the elevator on four actually came. I was still blotting at my slacks with a fast-food napkin when the doors opened and a young woman got in with me.

She was maybe Nadia's age. Blazer a size too big, the kind you buy when you don't have a job yet and you're guessing what the job will want you to look like. A leather portfolio under her arm, the zipper still shiny. She had earbuds in but she wasn't listening to anything; I could tell because her lips were moving.

She was rehearsing.

"—which is exactly why I think I'd be a strong fit for the," and then she'd stop, and her eyes would go up and to the left the way they do when you're reading something written on the inside of your own skull, and she'd start again. "One of my strengths is that I—" Stop. Reset.

I watched the floor numbers climb. She didn't look at me. To her I was furniture, a woman in wet slacks holding a cold coffee, part of the building. And I wanted, absurdly, to tell her: it's going to be okay, you're doing the right things, someone's going to see you. But I didn't know if that was true anymore, and you don't lie to someone that young that early in the morning. So I said nothing. The doors opened on three and she got out, still whispering, walking toward a lobby full of other blazers, and I rode up alone to the twelfth floor thinking that somewhere across the bay my sister had probably practiced those exact sentences into a mirror and then sent them into the same silence.

I didn't know the girl in the elevator. I want to be clear about that. But I have thought about her more than I have thought about almost anyone in this story, because she was the last person I saw that day who still believed the door would open if she knocked correctly.

By nine I was in the glass room.

That's what we called it — the glass room — the big conference room on twelve with the frosted wall you could book for the important things. Frosted so you couldn't see faces from the hall, only shapes, the way the whole day would turn out to be about shapes and not faces.

My job in that room was to be invisible and get everything down. I sat at the far end with my laptop, a little off the table, the way you sit when you're staff and not principal. The CEO was at the head. Two of the investors dialed in on the screen, faces the size of dinner plates, one of them clearly walking somewhere, the city behind him jostling. And the consultant stood at the front with his slides.

I'd met his type before. Good shoes. A voice built for rooms like this — warm at the edges, certain in the middle. He wasn't a cruel man. I want to say that plainly, the way I'll have to say it about all of them, because the story people expect is a story with a villain in it, and this isn't that. He believed what he was selling. That might be the worst part.

His first slide was a photograph of the ocean. His second slide was the word.

Efficiency.

"We're not here to talk about cutting," he said. "We're here to talk about unlocking. There's capacity trapped in this organization — in workflows, in repetition, in tasks that no longer require a human hand. The question isn't who do we lose. The question is what could these people be doing if the machine carried the weight they're carrying now."

It was a beautiful sentence. I typed it word for word.

Then the cost curve came up. A line that went down. Everyone in that room understood a line that went down. Below it, in a font two sizes smaller, a row of little icons — a headset, a pen, a pencil, a wrench — and beside each icon a percentage, and beside each percentage a phrase like automatable and augmentable and one, near the bottom, that just said legacy.

I looked at the wrench. Twenty years I'd worked with the man that wrench meant, though of course the slide didn't know his name. I looked at the headset. I looked at the pen.

And here is the thing I have not told many people. Somewhere on that slide, in a percentage next to an icon I didn't let myself find, was me. Executive assistant. Coordinator. The person who makes the office run. I had spent three years being so good at my job that I had made my job look like something a machine could do — every template smooth, every calendar seamless, every draft in the voice the boss wanted before he knew he wanted it. I had sanded down every rough human edge of my own work until it gleamed like something you could buy off a shelf.

The consultant said, "The technology is ready. Frankly, it's been ready. What's been missing is the will."

One of the investors, the one who was walking, stopped walking. His face filled the screen. "What's the number," he said. Not a question. The city was still behind him and I remember a seagull crossed the frame, white, indifferent.

The consultant clicked to the last slide. It had a number on it. It had a date on it — this quarter, the one we were in, the one with eleven days left in it.

And the CEO, who had said almost nothing the whole time, rubbed his eyes with his thumb and two fingers, the way you do when you've been staring at a screen too long, or when you're trying to push something back behind your face before it gets out. He said, "How many people."

The consultant told him how many people.

The room did the thing rooms do. It didn't gasp. Nobody's a monster; nobody gasped. There was just a small settling, a shifting of weight, the sound of a decision being accommodated, and then the meeting moved on to timeline and messaging and something the walking investor called "the narrative," and I got all of it down, every word, because that was my job, and I was very, very good at my job.

No one who was going to be cut was in the room. That's the part I keep coming back to. The room where it happened had no one in it who it happened to. Except me. And I was taking notes.

He asked me to stay after.

The others filed out — the consultant shaking hands, the screens going dark, the investors' dinner-plate faces snuffing to black — and it was just the two of us in the glass room with the frosted wall, and the CEO stood at the window with his back to me looking at the bridge in the haze.

I want to tell you about him, because I think you already have a picture and I think the picture is wrong.

He'd started this company in a way that meant something to him. I'd heard the story enough times to know the parts he loved: the first office over a taquería, the whiteboard he wouldn't let anyone erase for a year, the day they made payroll by four hours. He knew people's kids' names. He'd cried — actually cried, I was there — at the memorial when one of the early guys passed. He was not a man who enjoyed what had just happened in that room.

He said, without turning around, "You know what they told me on the last board call?"

"No," I said, though I could guess.

"They told me every one of our competitors is 'moving on this.' Those words. Moving on this. Like it's weather." He laughed, but it wasn't a laugh. "One of them sent me a chart. A chart of other companies' layoffs. As a — as a positive indicator. Like it's a race and we're behind."

The haze was burning off the bridge. You could see the towers now, red-orange, the cables strung between them like something a spider would be proud of.

"I hired half these people," he said. "You know that? Half of them, personally. I sat across a table from them and I told them to leave whatever they were leaving and come build something with me. And they did." He turned around finally and his eyes were tired in a way sleep doesn't fix. "And now there's a man with an ocean slide telling me I can't afford my own promises."

I didn't say anything. I've learned that people who are about to justify something don't want you to agree. They want you to be a wall they can throw it against and hear the echo.

"I begged them," he said, and now there was an edge, the frustration under the guilt, both real, both true at once. "Two years ago. I brought in trainers. I paid for the courses. I said, learn these tools, get ahead of this, I'm trying to protect you. And you know how many finished the training? You know how many even logged in?" He shook his head. "I can't save people who won't— " He stopped. He heard himself. To his credit, he heard himself, and something crossed his face that I think was shame at the shape his own sentence was taking.

Then he sat down across from me, and he was just a tired man in an expensive chair, and he said the thing he'd kept me for.

"I need you to draft the announcement." He wasn't looking at me. "You know how I sound. You always know how I sound. Make it— " his hand moved in the air, searching, "— make it human. Make it sound like it came from me and not from him." He meant the consultant. "Can you do that?"

And I said yes. Of course I said yes. It was my job, and he'd asked me kindly, and he looked like a man drowning politely so as not to make a scene. I said, "I'll have a draft to you by end of day."

He said thank you. He said it like he meant it. He said, "I don't know what I'd do without you," and neither of us heard it, not then, not the way I hear it now.

I went down to the fourth-floor kitchen to get away from the twelfth floor for ten minutes, and that's where Marcus was, and that's where the day got its second crack in it.

Marcus was one of the good ones. A brand guy, a voice guy — he wrote the words the company said out loud, the taglines, the little scripts for the videos, the warm two sentences at the start of things. He had a real voice too, a radio voice, and sometimes they'd use it, record him reading a line for an ad because it was cheaper and faster than a booth and a talent fee, and he liked it, he'd told me once, he liked hearing himself be the company for fifteen seconds.

He was standing at the counter with his phone in his hand and his coffee going cold and he did not look up when I came in.

"Maya," he said. "Come here. Tell me I'm crazy."

He held the phone out. It was a video — one of ours, a new spot, thirty seconds, clean and pretty, the product turning slowly in nice light. And over it, a voice. Warm. Certain. Familiar.

His.

"That's the new campaign," I said. "It's nice. Is that you? It sounds like you."

"It sounds exactly like me," he said, and his voice had a thing in it I'd never heard from Marcus, who was the calmest man on four. "It sounds like me because it's supposed to sound like me. But Maya." He put the phone down on the counter very gently, the way you set down something that might go off. "I never recorded it."

"What do you mean you never—"

"I never recorded it. That session never happened. I've never said those words in my life." He picked the coffee up and didn't drink it and put it down again. "They fed it the old spots. All the ones I did record. And it — it learned me. It learned how I say my S's, how I come down a little at the end of a sentence, the thing I do where I— " He stopped. "These are words I never said, Maya. In my mouth. In my actual voice. And they shipped it, and it went out to I-don't-know-how-many people, and every one of them thinks I stood in a room and said it."

The refrigerator hummed. Somebody two floors up was laughing at something.

"It's flattering, right?" he said, and smiled in a way that had no smile in it. "That's what the guy said when I asked him. He said it's a compliment, it means your voice is an asset." He looked at me. "An asset. Do you know what they do with assets, Maya? They don't have to pay an asset. They don't have to ask an asset if it wants to say the thing."

I didn't have anything. I'm the person who always has something — a word, a fix, a let me look into that. I had nothing. I stood in the fourth-floor kitchen with a man listening to himself say words he had never said, and the only thing I could think, and I hated myself a little for thinking it, was: end of day, I have to write the announcement.

Marcus picked his phone back up. He played it again. I don't know why. I think he was checking whether it was still true. It was still true. The warm certain voice filled the little kitchen, saying its pretty words, and Marcus mouthed along, silent, matching himself, getting every inflection right — because of course he did, it was him, it had always been him, it was just that he wasn't there anymore.

The stairwell was where I saw Daniel, and I'd known I would, because I was the one who'd put the meeting on the calendar.

That's a small thing that I will carry for a long time. The exit conversations were on the twelfth floor, scheduled in fifteen-minute blocks, and someone had to build that schedule, slot the names into the grid, send the calm little invitations — quick sync, 2:15, please bring your badge. And that someone was me. I had typed Daniel's name into a two-fifteen. I had chosen two-fifteen for him instead of two-thirty because two-thirty had a hard stop after it and I hadn't wanted him rushed. That was the kindness I had to offer. Fifteen minutes instead of twelve. I arranged the chairs of his dignity while the building took the floor out from under him.

He was on the landing between eleven and twelve, and he'd stopped there, box in his arms — not even a full box, a partial box, a man of twenty years fits in less than you'd think — and he was just standing, looking at the little wired-glass window in the stairwell door.

Daniel had been there since the taquería. He was the wrench on the slide.

"Maya," he said. He didn't sound angry. That was the thing about all of them — nobody in this whole story ever got to be angry in the clean way that would've felt good. "You okay? You look like you've had a day."

That he asked me. That's Daniel.

"I'm okay," I said. "Daniel, I'm so—"

"Don't." Gentle. "Don't do the sorry. You didn't do it." He shifted the box. On top there was a photo in a frame, a kid on a bike, and a coffee mug, and a tangle of cables he probably didn't even need anymore but you take your cables, you've had those cables twenty years. "Can I tell you something stupid?"

"Yeah."

"I've applied to about eight hundred jobs." He said it the way you say a number that's stopped feeling real. "Since the rumors started. I got ahead of it, I thought. Eight hundred. And you know how many humans I've talked to? Real people, on a phone, a face?" He held up his hand and made a zero with his fingers. "Zero. Not one. I upload the résumé into the box and the box thanks me and then — nothing. You start to feel like a rumor. Like you're not sure you exist. Like there's a machine somewhere reading me and deciding I'm not — I don't know. Not the right shape. Filtered out before a human even sees me. Twenty years and I can't get filtered in to a phone call."

The stairwell smelled like stairwells do, concrete and cold metal. Somewhere below us a door opened and closed.

"They loved me here," he said, and it wasn't bitter, it was bewildered, which was worse. "You know? This place. I gave it my thirties and my forties. And the company's doing great, Maya. That's the part I can't— we're not sinking. We just hit a number. I read the same emails you do. We're up. They're not cutting me because there's no money. They're cutting me because a slide said they could." He almost laughed. "I got optimized. Twenty years and I turned into a percentage."

He looked at the wired glass again, at the shapes of people moving on twelve.

"I should go up," he said. "Two-fifteen, right? Don't want to make them wait." And he smiled at me, an actual one, the real thing, the kind the machine can't do because the machine has never lost anything, and he went up the last flight with his partial box and his kid on a bike, and I stood in the stairwell and I did not cry because I still had a draft to write and I have always been able to hold it until the work is done.

I have always been able to hold it until the work is done. That used to sound like strength to me.

By seven the floor was empty and the windows had gone from gold to blue to black, and the city was doing its evening thing out there, the lights coming up in the towers across the way, each one a person still at a desk or a person going home.

I sat down to write the announcement.

And here is where I have to tell you about the assistant.

Months before — before the ocean slide, before any of it — someone in operations had rolled out a new tool. An AI writing assistant, trained "on our own materials, in our own voice," to help everyone draft faster. And they'd needed someone to feed it. Someone whose writing was the company's voice, whose emails set the tone, whose templates everyone quietly copied. They'd asked me. Of course they'd asked me. I was the voice. I said yes — it was my job, and it was flattering, and it would save everyone time, and I believed that, I still half believe it.

So for weeks I had fed it. My announcements. My gentle nudges. My just circling back on this. My condolences and my congratulations and my so sorry for the delay, here's where things stand. Every warm competent human word I'd ever written to hold this office together, I had poured into the machine so it could learn to be warm and competent in my place. I taught it my rhythm. I taught it the little turns I did, the way I'd start hard news with something true and small and kind. I taught it me.

That night, tired, gutted, wanting the day to end, I did the thing everyone did now. I opened the assistant. I typed: Draft a message to the company announcing a workforce reduction. Compassionate. In our voice.

And I got up to refill my water, because it takes a second.

It did not take a second.

When I came back the draft was already there. All of it. And I read it standing up, one hand still on the back of my chair, and the floor did a slow thing under me.

It was perfect.

It opened with something true and small and kind — the way I always did, the way I'd taught it. It said this is one of the hardest messages I've ever had to write, which was a line I used, my line, a line I'd fed it in a dozen forms. It thanked people before it hurt them. It came down soft at the end of the hard sentences the way Marcus came down soft at the end

of his. It was compassionate. It was in our voice. It was in my voice. It was the message I would have written, that I had been asked to write, sitting there finished on the screen at 7:04 in the evening, and it had taken the machine less time than it takes to fill a glass of water.

I want to describe the specific feeling, because I've never had it before or since, and I think it's the feeling this whole book is about.

It was not fear, exactly. It was recognition. It was looking into a mirror and having the mirror finish your sentence. Every draft I'd ever polished so it wouldn't sound like a person struggling — every rough edge I'd sanded off my own work to look effortless — I had been, without knowing it, filing down the one thing that couldn't be copied until there was nothing left of me in the work that a copy couldn't hold.

I had trained my own replacement. In my own voice. To announce the layoffs. And it had learned the human touch from me so well that it could now fire people warmly, and no one would know the difference, and the CEO would read it tomorrow and say this is perfect, this sounds just like you, and he would be more right than he could possibly mean.

I sat down. I changed three words. I don't even remember which three. I changed them so that some part of me had touched it, so it wasn't entirely the machine, and I have thought since that this is the most human thing in the whole story — that at the very moment the machine proved it didn't need me, I reached out and changed three words just to prove that I was still there.

Then I sent it to the CEO, and I turned off my monitor, and I went home.

Nadia was asleep when I got in.

She was at the kitchen table, the old one, our mother's, with her head down on her folded arms and her laptop open in front of her, the screen dimmed to almost nothing but not all the way, so it still lit the side of her face a faint gray. She'd fallen asleep working. There was a mug with a ring of cold tea in it and a legal pad with a list on it in her round careful handwriting, follow up, follow up, thank-you note, follow up, and next to some of them little checkmarks, because she was disciplined, my sister, she did everything right, she followed up, she wrote the thank-you notes, she checked the boxes.

I woke the laptop with one finger, just to dim it the rest of the way so it wouldn't keep her from real sleep, and the browser bloomed up bright before I could stop it.

Tabs. A row of them so long they'd stopped being tabs and become just a gray smear across the top, each one shrunk to a sliver, two hundred of them, three hundred, I couldn't count, job boards and application portals and your application has been received and we regret to inform you and one, near the end, still open to a field she'd been filling in when she fell asleep, the cursor still blinking in the box, Tell us about a time you overcame a challenge, the box empty, the cursor patient, blinking, blinking, waiting for my sister to explain herself to a machine that would read her in four seconds and file her in the same place it filed Daniel.

I closed the laptop, softly, so the blinking stopped.

I stood in our mother's kitchen and looked at my sister asleep over the machinery of her own hope, and I thought about the girl in the elevator rehearsing, and Daniel making a zero with his fingers, and Marcus mouthing along to himself, and the ocean slide, and the number, and the perfect warm draft I had written without writing, and the billboard.

Are you still hiring humans?

Nadia stirred and said something that wasn't a word and settled again. I put a blanket over her shoulders. I did not wake her, because there was nothing I could tell her yet that was both true and kind, and I have a rule about that, and it is the last rule I had left.

That was the winter.

I'll tell you how it went, because you'll want to know, and because the how of it is the whole reason for this book.

The announcement went out and it was, everyone agreed, handled well. Compassionate. In our voice. The stock did a small good thing. The walking investor sent one word, good, and stopped walking, I imagine, long enough to type it. The slides were right: the line went down. For about a quarter, the line went down, and everyone who'd wanted the line to go down looked at each other and felt the specific pleasure of having been right.

And then.

It's not dramatic, the and then. I keep wanting to make it dramatic and it refuses. Nothing exploded. What happened was quieter and worse than exploding.

The machine wrote the emails now, and the emails were warm, and then a big client got one that was warm and confident and completely wrong — it had invented a fact, stated it

beautifully, and no Daniel was left to catch it, because catching it had been part of what Daniel did in between the parts of Daniel's job that showed up on a slide. The warmth was there. The care was gone, and it turned out care was load-bearing.

The voice kept selling but the voice couldn't sit across a table from an angry customer at 6 p.m. and find the one true small kind thing to say that made them stay, because Marcus used to do that too, off the clock, and Marcus was gone, and Marcus's cloned voice could say anything except the thing it hadn't been given.

The support queue got faster and the customers got angrier, because it turned out what people had wanted was not speed, it was to be read — to feel that a human somewhere had held their small problem in two hands for a second — and the machine could do everything except hold it.

And the clients started leaving. Not in a stampede. One and then another, quietly, the way people leave a party, no scene, just fewer coats on the rack each time you look. And the number the investors loved began, very softly, to do the other thing.

I know the exact week it turned because I was still in the glass room taking notes. The consultant was not on the slides anymore; he'd unlocked our efficiency and moved on to unlock someone else's. And the CEO sat at the head of the table looking older than the winter should have made him, and someone from operations said, carefully, the way you'd approach a horse, that we might need to "bring some capacity back on." Bring some capacity back on. That was the phrase. Not we were wrong. Not the machine couldn't do it. Bring some capacity back on, as if the people were a river we'd dammed and could let flow again, unchanged, when we got thirsty.

So we rehired.

Quietly. That's the part I need you to sit with — how quiet it was. There was no announcement for that. I'd written the letter that sent them out, in my own voice, and there was no letter to bring them back, because a company will shout that it's becoming efficient and whisper that it was wrong. We called some of them. Not all. Some had already found the next thing, or the thing after the next thing. Some, when we called, went quiet on the phone in a way I understood completely, the quiet of a person deciding how much of themselves to hand back to the people who'd handed them a box.

They didn't call Daniel. I checked. I'm not proud of how I checked, but I checked. By then Daniel was somewhere else, doing something smaller for less, filtered in at last by some

human who'd picked up a phone, and I hope that human knows what they got.

There was no triumph in it. I keep looking for the triumph and it isn't there. Nobody stood up in the glass room and said we were wrong, the humans were the miracle all along. We just went quiet and made some calls and pretended, in the specific way that companies and people pretend, that the winter had been weather and not a choice. The line went back up, a little, once the care came back on, and everyone agreed not to notice why.

Weeks later I was in the car again, coming down the same ramp, the bay the same flat silver, my coffee between my knees, and the billboard had changed.

It was an ad for something else now. It doesn't matter what. But I found myself waiting at the light for it to cycle around, waiting to see if the old one was still in the rotation, are you still hiring humans, and it wasn't, they'd taken it down, sold the space to someone selling something simpler.

And the light was red and I sat there and the question that came was not the billboard's question. The billboard's question was easy; the billboard's question had an answer, and the answer, it turned out, was yes, obviously, you have to, we tried the other thing and it broke. No. The question that came to me at that red light was harder, and it's the question I've been carrying ever since, the one I couldn't put down.

Because the machine couldn't really do the work. That was proven now. It cracked, the customers felt it, the quiet rehiring said out loud what nobody would say out loud. The hardware — Daniel, Marcus, the girl in the elevator, my sister asleep over her two hundred tabs, me — the hardware was never the problem. The hardware was, if anything, the miracle. It was the part that could catch the invented fact and sit with the angry customer at six and find the one true small kind thing. It was the only part that had ever actually worked.

So why had we all believed it couldn't?

That's the question. Not can the machine do it — it can't, not the human parts, not yet, maybe not ever. The question is: why did every single one of us believe that it could? Why did the CEO believe it, a good man who cried at a memorial and knew people's kids' names? Why did the investors believe it, and the consultant with his ocean slide who wasn't even lying, not exactly, because he believed it too? Why did Daniel half-believe it, standing in the stairwell wondering if he was the wrong shape? Why did my sister believe it enough to keep pouring herself into a box that never wrote back? Why did I believe it — I, who had every reason to know better, who had held the human parts of this office in my two hands for

three years — why did I sit in that glass room and type the consultant's beautiful sentence word for word and feel, God help me, that it was true?

Someone taught us to feel replaceable. That's what I understood at the red light. Not are. Feel. The feeling came first, before the fact, and the fact never even caught up — the fact went the other way, the fact was that we were needed all along — but the feeling had already done its work. The feeling had emptied a building. The feeling had put Daniel's kid on a bike into a partial box on a stairwell landing. The feeling had my sister apologizing to a cursor for existing.

And feelings that convenient, that widespread, that perfectly timed to a quarter — feelings like that don't just fall out of the sky. Someone makes them. Someone puts them on a billboard at the bottom of an off-ramp where you'll see them with your coffee between your knees at 6:52 in the morning. Someone profits from a whole city of people who've been taught to feel like a rumor.

The light turned green.

They came for the hardware, I thought, pulling forward into the city. They came for the hardware — for Daniel, for Marcus, for the girl in the elevator, for me.

But the hardware was never the problem.

I needed to find out who told us it was.

A friend talked me into being her guest at a speaking club one Tuesday night — one of those rooms where people practice standing up in front of other people. I almost didn't go. But one of the speakers that night was talking about the brain, ours, the machinery in our heads, and he said a few things I couldn't stop turning over on the drive home. I found him afterward by the coffee and told him I wanted to hear more.

His name was Mo. He didn't say much about himself. He just looked at me for a second, like he was deciding something, and then he handed me a flyer.