# the code detectives

#1: The Code Con Crisis

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#### Dedications:

To Tess, Tiffany, and Amy, thank you for inspiring my interest in AI, supporting me, and always cheering me on.

To Dr. Dorsa, Dr. Jeannette, Michelle, Minae, Mengxi, thank you for being the most amazing mentors I could have ever asked for.

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## CHAPTER 1 THE COMPETITION

"Pencils down."

Ramona sighed with relief as she did as told, watching as the whole class burst into boisterous chatter, eager to be done with testing. *Finally*.

Today had been the day of Riverside School's annual standardized testing — in other words, a long day of reading, writing, and mathematics

exercises that left Ramona not only exhausted but also extremely hungry.

As their teacher went around collecting tests, Ramona brushed her short wavy hair out of her face and turned to the girl sitting next to her, whose striking emerald eyes met her hazel ones.

"How'd it go for you, Ramona?" the green-eyed girl asked.

Ramona responded, smiling, "It went well, I think. The reading section put me to sleep though." She shook her head, glad to be rid of the test. "You, Lily?" she added.

"Fine. I think I messed up the math question about right triangles. I'm so dumb, I completely forgot

about the 30-60-90 rule, I can't believe it..."

Ramona laughed as Lily continued to ramble about the question she missed. Something Ramona had learned over the years was that her best friend was a perfectionist. One question wrong would send her into a fit of remorse.

When Lily had moved to Riverside three years ago, Ramona had found herself a new neighbor. Although Ramona's first impression of Lily had been of a timid, introverted girl, completely opposite from Ramona's spunky, confident self, she soon saw Lily's brilliance and kindness shine through. What with frequent visits to the park, countless sleepovers, and of course, dozens of Disney movies, the two girls quickly became close friends and now attended Riverside School

together.

Lily's sudden change of expression brought Ramona out of her reverie.

"Oh my gosh, Ramona, do you think Mr. Delaney's going to announce results today?"

Results? Ramona shot her friend a confused look, to which she clarified, "For Code Con."

A wave of panic washed over Ramona. She had completely forgotten.

One month ago, Mr. Delaney, their computer science teacher, had asked his technology class to form teams and come up with a proposal for an app they would be working on for the next few

weeks. After reviewing these proposals, Mr.

Delaney would select one team to represent the school and compete at the Riverside Code Con this Saturday, with the whole class there to support them.

Ramona and Lily had submitted Ocean, an app to raise awareness about climate change. After working hard on it for the past month, Ramona was hopeful about their chances of going to Code Con.

"I can't believe I forgot!" Ramona exclaimed. "I mean, it would only make sense. Code Con is in, like, six days, and the team that's selected would need time to prepare." Lily nodded thoughtfully.

Ramona looked up at the clock, which read

3:06pm.

Nine more minutes until class ends. Ramona thought to herself. If he announces, it'll be anytime now.

She glanced at Lily, who had grabbed her pencil and started working on the math problem she had missed, deep in thought and evidently not showing any nervousness.

Shaking her head in wonder, Ramona asked, "How are you *doing* that?"

Lily turned to her friend and gave her a bemused stare. "Doing what?" she replied.

"How are you not stressed out at all right now?

There's like, eight minutes until Mr. Delaney might announce results." Ramona said disbelievingly.

Understanding washed over Lily as she laughed.

"Oh Ramona, there's no point in stressing. Even if we don't get to go, we created a *great* app. We'll be fine either way." Lily reminded her friend.

Ramona sighed. "I know, but going to Code Con would be the coolest thing we've ever done. Not to mention, it would finally stop Ronit and his friends from complaining about us," she said, rolling her eyes.

Ronit, one of the most popular boys at Riverside School, also happened to enjoy coding. The problem, though, was how he and his clique of guy friends would not-so-subtly brag about their various coding projects to everyone possible. The worst part about it all was how they went around demeaning the work Ramona and Lily did, blaming all of their accomplishments on the fact that they were girls, as if their gender undermined their hard work and skill.

"All right class. May I have your attention?" Mr. Delaney called.

Ramona's neck snapped so quickly to the front of the classroom that she groaned in pain. Lily hid a giggle beside her. Glaring at her best friend, Ramona directed her gaze back up to her teacher, wide-eyed and hopeful. The whole class apparently shared her sentiment and fell into a tense silence quite the opposite of their chatter moments ago. "First of all, I want to let you know that your test results, essay and all, will be scanned into a database and that your scores will be accessible to you all by this Friday. I'm sure you all did very well."

Smiling at his class, Mr. Delaney paused, and then added, "Secondly, I want to say that I'm very proud of all the hard work you have been putting in to create your apps." He looked over the rim of his glasses at his class with pride. "You've all done an amazing job. However, as you know, I am only allowed to pick one team to represent our school at Riverside Code Con. After reviewing your proposals, I've decided to send —"

The silence that followed was deafening. Ramona crossed her fingers under her desk. *Please, please,* 

please, she pleaded silently.

"Ramona and Lily, with their app Ocean!" Mr.

Delaney announced, turning towards the girls with a smile.

The class erupted in applause as Ramona grinned widely. She looked at Lily, whose cheeks had flushed happily, and they high-fived.

Ramona smiled proudly as she saw most of the class cheering wildly for them, but as she directed her eyes towards Ronit and his friends, that changed. They were the only ones that looked positively furious, with Ronit muttering something angrily under his breath.

Probably something about how we're just girls,

Ramona thought, hiding a smirk. It wasn't her fault that Mr. Delaney had liked Ocean more than Ronit's race-car game.

She broke out of her thoughts as Mr. Delaney waved his hand for silence. "Thank you. Now, before you leave, remember that each of you is expected to arrive at school on Saturday morning by 8am, at which point our bus will leave to take us to Code Con, where we will watch Lily and Ramona present their app and compete to win. Does anyone have any questions about this?"

He paused briefly, at which point a sandy-haired boy, who Ramona knew to be Jake, one of Ronit's friends, raised his hand.

"Mr. Delaney, do we all have to go to Code Con?"

Jake drawled, glancing briefly in the direction of Ramona and Lily, the former of whom glared at him.

Seeming to sense the touch of resentment in his student's voice, Mr. Delaney raised an eyebrow as he replied firmly, "Yes. I'm afraid it's not an option but a requirement, Jake. Anyone who wishes to receive full credit for their app must be present."

And with that, the bell rang, and the class resumed their boisterous chatter as they packed up their belongings. As she cleared her desk, Ramona felt two arms wrap her and Lily in a bear hug from behind.

"Ramona, Lils! I am so proud of you, you are amazing!" exclaimed a tall girl with long dark hair.

Ramona turned around and grinned. Tara was one of the most popular girls at school, but she had been like a sister to Ramona and Lily ever since kindergarten. Ramona was thrilled that Tara was taking the all-grade computer science class with her and Lily despite Tara being two years older.

"Thanks Tara!" Lily responded happily, smiling up at her friend.

"You guys totally deserve this. I'm excited to see you guys present." Tara said, smiling. Then, in an undertone, she continued, "And congrats on beating the boys." Grinning knowingly, Tara patted Ramona on the shoulder and exited the classroom, leaving an amused Ramona and Lily in her wake.

As Ramona put her binders in her navy blue

backpack, she heard Mr. Delaney call out, "Girls, may I speak to you?"

Ramona looked around for who he was speaking to, and then realized that she and Lily were the only ones still left in the classroom. Setting her backpack on the nearest chair, she joined Lily at Mr. Delaney's desk.

"I have a request." Mr. Delaney admitted. "One of my students has just transferred from a school across the country, and she's having a bit of a hard time fitting in. The principal asked me to find her a student she could shadow for a while before she's comfortable. Would you two mind helping her fit in and get familiar with our school?"

Ramona tilted her head in curiosity, then nodded

and said, "Of course, Mr. Delaney. Where is she?" Suddenly, the door opened slightly, and a shy girl peeked inside, her straight black hair tied into a long ponytail. Stepping inside the room, she introduced herself.

"Hi, I'm Akira."

## CHAPTER 2 THE NEW GIRL

"Ooh I'm so excited," Ramona said, the door chime tinkling as she entered Felicity's Ice Cream Shop. Lily laughed at Ramona's eager expression.

To celebrate their nomination to Code Con,
Ramona and Lily had decided to treat themselves
to ice cream and had invited Akira along to get to
know her better. And what better place than
Felicity's, which boasted one hundred delicious

flavors of the icy treat, to Ramona's absolute delight.

"I'll have a double-chocolate scoop please, with raspberry syrup on top." Ramona licked her lips excitedly as she pulled a five-dollar bill out of her pocket.

Felicity, the ice cream shop owner, took the money, winked, and replied, "Sticking with your favorite, Ramona?"

Laughing, Ramona nodded. Felicity had known the girls for ages. Ever since she had opened the ice cream shop a few years ago, Ramona and Lily had been regular customers — not just for the delectable ice cream, but also for the pleasant chats with Felicity.

Smiling kindly from over the counter, Felicity asked, "The regular for you as well, Lily?"

After Akira and Lily had also made and received their orders, the girls sat down at a booth, where Ramona decided to strike up conversation.

"So Akira, where did you live before?" she asked, licking her ice cream.

"Well, I move around every couple of months because of my dad's job. I used to live in New York most recently until I came here." Akira replied, dabbing her face with a napkin.

Ramona's eyes softened. Moving around undoubtedly meant a new school, new house, and worst of all, new friends. And to do that every

couple of months? Ramona couldn't imagine a week without having Lily around, let alone never seeing her again.

Akira, seeming to sense her pity, giggled a little.

"Oh, don't feel bad. New York was amazing. Plus, I kind of like traveling. It's fun to see new places."

Lily's eyes shone with curiosity as she lifted a spoonful of mint-chocolate chip ice cream to her lips. "That's so cool. I've always wanted to travel to New York," she said, with a touch of wistfulness. She added, "Where else have you lived?"

"Hmm, that's a good question," Akira said thoughtfully. "I've lived in too many places to count, really, but some of my favorites have been London, Brazil, Vancouver, and Los Angeles."

Ramona's jaw dropped. *London? Brazil?* "Whoa, that's exotic!" she replied, grinning. "So why Riverside?"

Akira stiffened at the question, and then sighed bashfully, dropping her hands into her lap. "Well, it's sort of embarrassing, but my dad is kinda .... rich. He has his own business, and one of his clients is here in Riverside, so we moved." Sensing the girls' curiosity, she continued, "The only reason Riverside School let us transfer is that my dad funds a lot of the stuff here, like the computer science curriculum, the athletics program, and — ."

But Ramona had stopped listening. "He *what*?" she exclaimed excitedly. "Akira, that's so cool! Coding is, like, our favorite subject. I can't believe it's all thanks to your dad!"

Akira blushed. "Thanks! But it's not as cool as your climate change app!" she said, offering the girls a small smile. "Ocean, right? Everyone's been talking about it. I —" Akira paused mid-sentence as her phone started to buzz. Looking down at her phone for a few seconds, she sighed.

"Sorry guys, I have to go. My ride is outside." Akira said, smiling sadly at the girls.

Ramona looked out the window and her eyes widened. She had to control herself from asking Akira if the sleek black limo outside the shop was her ride.

"See you guys tomorrow at school!" Akira said, and in a flash, she was gone.

After watching the limo leave the premise, Lily turned to Ramona. "She seems nice. A little shy though."

Ramona nodded. "Yeah. Well anyway, I'm glad we're finally alone. We should probably discuss our plans for Code C—"

But Ramona never got to complete her sentence, as two of the most popular girls of the 6th grade, Lauren and Amelia, marched over to their booth.

"Hey guys!" said Lauren prettily, as she and Amelia slid into the seat across from them. Ramona looked at Lily in disbelief. Who gave them the right to just slide into their booth?

Giving neither Lily nor Ramona the chance to

return the greeting, Lauren announced, "So. We're hosting a super amazing sleepover, with games, movies, food, and so much more."

"And...we want to invite you!" Amelia exclaimed, sliding two velvet envelopes across the table.

Ramona's eyebrows shot up in surprise. Lauren and Amelia's parties were famous for being really fun and very exclusive. Neither Ramona nor Lily had ever been invited to one because they didn't talk to them very much.

Lily, however, didn't seem to notice this, and couldn't contain her excitement.

"Seriously? Oh my gosh! When is it?" squealed Lily excitedly.

"Friday evening at 5pm. My house." Lauren said with an equal amount of enthusiasm.

At this, Lily's excitement visibly vanished. Ramona wrinkled her forehead, confused. Lauren was Jake's sister; surely she knew that Code Con was the next day after the sleepover.

Giving them the benefit of the doubt, however,
Ramona said, "Sorry guys. We have the Riverside
Code Con on Saturday so we'll have to spend
Friday night practicing our presentation. But
thanks for inviting us."

Now, it was Lauren and Amelia's turn to be confused. "What? But you have to come. It's the biggest party of, like, the whole year!" Lauren said, a touch of desperation creeping into her voice.

"We've been planning it for weeks!" Amelia added.

Ramona gave them a weird look and glanced at Lily, who sighed. "Sorry guys. We really want to come, but we can't. Come on, Ramona, it's getting late anyway. We should go."

Finishing her last spoon of ice cream, Ramona grabbed her backpack and followed Lily out the door.

"That was sorta strange," Lily said, once the two girls were outside walking home. They had decided to head to Ramona's house to work on their Code Con presentation for Saturday before starting their homework.

Ramona nodded. "Definitely strange. I mean, we haven't talked to Lauren and Amelia in ages. And now they want to invite us to one of their parties?" Then she grinned and added, "Not like I'm complaining though."

Lily laughed. "True. But still, I thought Lauren would have known about Code Con this weekend. Isn't her brother Jake, from the group of guys who created that race-car game?"

"Yes, and that reminds me," said Ramona, remembering Mr. Delaney's announcement. "Ronit and his team were super jealous today, you know. When Mr. Delaney announced our names, I could've sworn I heard one of them say that we only won because we're girls."

"They're just looking for excuses," Lily said, rolling her eyes. "Our app was definitely better."

"Definitely," echoed Ramona, grinning, and the two girls high-fived.

## CHAPTER 3

"And...done!" Ramona said, scribbling the last few words on her paper. It had been two days since Mr. Delaney had announced that Ramona and Lily would be competing at the Riverside Code Con with Ocean. Today, Mr. Delaney had asked everyone to write a summary about their apps to take to Code Con, in case anyone asked about their work. Ramona had volunteered to complete the summary for Ocean while Lily worked on their

presentation for Code Con.

Beside them, Tara was working on her group's summary. Tara had teamed up with her own, older friends to create a smaller app dealing with the easier facilitation of online shopping, as her 8th-grade workload didn't permit her much time for technology class. Still, Ramona thought it had been pretty cool.

Nudging her older friend, Ramona asked, "Done yet?"

Tara looked up from her work, and replied, "Just about." Then, switching topics, she added, "I'm excited to see you and Lily present at Code Con though! How's your presentation and everything going?"

Ramona smiled, happy to indulge Tara's interest in their project. "It's going well. Lily's doing our presentation right now," she said, glancing at her best friend, who was typing away on her keyboard.

Leaning over Lily's screen, Tara gasped. "Ooh, that looks really nice! I love the design! I would make the theme blue and green though, for the Earth you know, and ..."

As Tara gave Lily some feedback on their presentation, Ramona leaned back in her spinning chair, and let her eyes wander, where she saw Ronit's group exchanging furtive glances at her and Lily. At her gaze, they turned away quickly. *Weird*, Ramona thought, as she spun her chair again, turning to where she saw Akira doing an assignment for literature class, not having been at

Riverside School in time to work on the app projects. Ramona rolled her chair over to her.

Sensing her presence, Akira looked up. "Hey, how's it going?" she asked, smiling shyly at Ramona. Her smooth black hair had been done up in a high bun today.

Ramona returned her smile and said, "Fine, just finished the assignment. Too lazy to go and turn it in right now though, my chair's too comfy."

Leaning back, she swizzled her chair around in circles to prove her point, making Akira laugh.

"Want me to turn it in?" Akira asked, rolling her eyes, though smiling kindly.

Ramona grinned up at her new friend and replied,

"That would be *lovely*." Handing her the paper, and grabbing Tara's as well, she smiled appreciatively as she watched her new friend deliver the papers to Mr. Delaney, who was on the phone speaking rather heatedly.

Rolling her chair over to where Lily and Tara were having a heated discussion about their presentation's theme colors, Ramona felt giddily happy. She still couldn't believe that she and Lily would be pitching Ocean at Code Con this weekend; it all felt so surreal.

Suddenly, she saw Mr. Delaney approaching.
Ramona hastily pretended to be involved in
working on the presentation, to which Lily rolled
her eyes and hid a smile. Ramona looked up when
her teacher reached her desk. To her surprise, he

looked paler and more worried than usual.

"Hello Tara, can I borrow Ramona and Lily for a minute?" he asked, peering at them over the rim of his glasses. When Tara nodded, Ramona and Lily followed their teacher to his desk, where he sighed.

"All right girls. I'm sure you know that people have been questioning my decision to send you to Code Con."

At this, Ramona shot a surprised look at Lily. Sure, she knew the Ronit's team would be angry, but she hadn't expected them to bring this up to Mr. Delaney.

"I just wanted to let you know that I

wholeheartedly support my decision. I want to remind you not to let anyone else's comments get to you."

Momentarily forgetting the strangeness of the conversation, Ramona couldn't help but smile at her teacher as he praised them. She felt glad that Mr. Delaney believed in them — it made her feel more confident in herself.

"Thank you, Mr. Delaney," Ramona said gratefully.

"We'll make you proud," added Lily, before the two of them returned to their seats, pondering the curious conversation they had just had.

#### CHAPTER 4

#### OCEAN

"There," Ramona said, smiling, as she taped the last bit of lights onto the display board. After their conversation with Mr. Delaney, Ramona and Lily had went to Ramona's house and had spent the past two hours after school designing and creating their display board for Code Con.

Sighing contentedly, Ramona leaned back to have a look at their work.

Within the afternoon, the white, bland piece of cardboard had transformed into a beautiful representation of the Earth, glowing vividly with tiny green lights. But Ramona's favorite part of their board wasn't the luminescence, but rather, the center panel, which featured a large phone cutout containing screenshots of their app, with the title Ocean written at the top in calligraphy.

Ramona grinned to herself. She loved making her projects look aesthetic, and this board was definitely it.

"I just hope the judges like it," Ramona said, wringing her hands together.

Lily laughed and replied, "Of course they will. It's beautiful. Now, what else do we have to do?"

Grabbing the checklist Mr. Delaney had given them, she read aloud, "Ok, we've done the display board and created our presentation. We still need to take our team picture, rehearse our presentation, and fill out registration forms.

Looking up, Lily said, "Well, I'd say we can definitely knock off the team picture and forms tonight. What time is it, Ramona?"

Glancing at her watch, Ramona replied, "It's already six. We should probably save the presentation rehearsal for tomorrow."

Nodding in agreement, Lily pocketed the checklist.

"Okay, so team picture then. I'll call my brother to take it for us. Diego!" Ramona gestured towards a

messy-haired boy about three years younger than herself who was sitting at the living room table scribbling furiously onto a piece of paper.

At his name, Diego put down his pencil and hopped over to his big sister.

"Whaddya want?" he asked, grinning up at Ramona.

"We need a team picture for Code Con. Can you take it for us, please?" Ramona asked hesitantly.

At this, Diego's smile vanished, only to be replaced by a look of disgust.

"Oh no. Not pictures. You say one picture, and then you end up making me take about fifty. Absolutely

not." he said, crossing his arms over his chest.

Lily muffled a giggle as Ramona inwardly groaned. She needed to get this team picture done so she could finish her homework and hopefully get some sleep. She thought wildly for a way to convince him, but luckily, she didn't have to.

Diego, sensing her desperation, had suddenly grinned and said, "Let's make a deal."

Ramona raised an eyebrow. This couldn't be good.

"I'll take your gazillion pictures for you, but you have to play two hours of basketball with me this Sunday. Deal?"

Ramona rolled her eyes but smiled. Leave it to her

brother to bring basketball into this.

"Deal."

After Lily left, Ramona set her backpack down and collapsed on the sofa. *Wow*, she thought to herself, stretching. Getting the nomination to Code Con, meeting the new girl and getting invited to an exclusive party? Ramona grinned to herself. The past couple of days had definitely been some of the craziest days ever.

Suddenly, she felt her stomach grumble loudly.

With a yawn, Ramona forced herself off the comfortable couch and made her way to the kitchen, where a tall woman with wavy black hair

like Ramona's was cutting some fruit.

"Hola mamá," Ramona greeted her mother, enveloping the woman in a warm embrace.

Upon seeing her daughter, Ramona's mom set the fruit down on the cutting board, wiped her hands, and returned the gesture.

"Hola mija, how's everything?" Ramona's mom asked, smiling at her daughter. Ramona laughed. "Great." As Ramona gushed about how she had designed the display board, her mother gathered the fruit she had cut and placed it into a bowl, sliding it to Ramona.

After Ramona finished speaking, Ramona's mom replied, "Ramona, that's amazing! I'm very proud of you." She smiled affectionately at her daughter, then said softly, "Following in my footsteps." Laughing lightly, she sat down at the table.

Ramona grinned at her mother. She loved how her mom loved coding as much as she did.

"How was your day, mamá?" she asked.

Smiling, Ramona's mother replied, "Amazing. My team is such a supportive group. It's not always easy being a software engineer, but trust me, after working for weeks, seeing the fruits of your labor is just an incredible feeling. Just like you and Ocean." Ramona's mother winked at her daughter.

Ramona immediately felt a surge of excitement. She couldn't wait to work on more projects like Ocean as she got older. "Speaking of Ocean," Ramona's mother continued, smiling knowingly at Ramona. "Your dad and I are looking forward to seeing you present at Code Con this weekend."

At this, nervous butterflies filled Ramona's stomach. Usually, she loved talking to people, but the thought of presenting her app to so many strangers was an admittedly intimidating thought.

Ramona's mother seemed to notice her strained expression and said, "Don't worry, you guys did an amazing job coding Ocean. And that's coming from a professional software engineer!"

At this, Ramona couldn't help but laugh.

"Thanks mamá," Ramona said, smiling up at her

mother, who returned the gesture.

"Now enough of this. Go do your homework." And with that, Ramona's mother left the kitchen.

After finishing her fruit, Ramona went back to the couch and took out her math homework. Twenty-five graphing problems. Groaning, Ramona reached for the remote and turned on the TV. If she was going to be doing homework for the next two hours, Ramona figured she might as well try to enjoy it.

About halfway through her math problems,
Ramona decided to take a break. Setting her
homework aside, she flipped through the channels,
until —

"... and experts are saying that artificial intelligence can be used to solve many of the issues our world is facing today, ranging from better disease diagnoses, electric autonomous vehicles, detecting cyberbullying, and even improving crime rates through better facial and handwriting recognition!"

Ramona's eyes widened. That couldn't be true. Every time she heard someone at school talk about artificial intelligence, or AI, it was always about robots who would take over the world. But all of these benefits? She made a mental note to ask her mom about it later.

Suddenly, Ramona felt a hand on her shoulder, tugging her out of her reverie. She looked up to find Diego staring up at her. "Ramonaaa," he whined. "I finished all my homework, but I don't get this question. Can you help me?" Diego said pleadingly.

Ramona looked at her brother and sighed. Her brother was in third grade, she didn't understand why he cared so much for his academics.

Nevertheless, she conceded at his hopeful expression.

"Sure, but quickly. What's up?"

And Ramona spent the next fifteen minutes giving her brother an explanation on the difference between the present and perfect tenses that made her feel glad she would never have to put up with third-grade grammar again.

"Yes! I got it, thanks Ramona," Diego said, a few minutes later. Grinning, he gave his sister a brief hug and then left the room.

Ramona looked wistfully at her brother as he left the room to play basketball. She wished she didn't have as much schoolwork as she did, so she could do things she enjoyed too. She longed to open her laptop and start investigating artificial intelligence right now, but it was already 8pm. She needed to finish her homework.

Sighing, Ramona turned off the TV to eliminate any more distractions and promised herself that after Code Con, she would dedicate her time towards learning more about this exciting new field.

## CHAPTER 5 THE BOMBSHELL

"Oh my gosh."

Ramona had woken up early the next morning excited to add some finishing touches to Ocean with Lily at school. What she hadn't expected to see when she opened their screen was —

"Nothing. Absolutely nothing. All our code is *gone*." Ramona said, shaking her head in disbelief. Lily's

face had turned pale.

"What? What about edit history?" Lily said, her emerald eyes emanating concern.

"Deleted as well," Ramona said, frustration bubbling up inside of her. Lily tugged at a strand of her hair nervously, near tears.

As the bell rung and their classmates started to file into the room, Ramona heard Mr. Delaney giving the daily announcements, but she could barely hear him. All she could feel was a cloud of disappointment.

A few minutes later, Mr. Delaney, noticing the girls' dejected faces, walked over.

"What's wrong, girls?" he asked curiously.

Ramona took a deep breath to calm herself and told him what had happened.

Mr. Delaney's eyes widened in disbelief. "Oh no, that's terrible! Let me have a look," he said, leaning over their computer screen. After ten minutes, however, he finally realized it was to no avail.

"I'm sorry girls. It's really a pity." Mr. Delaney said.
"Unless you can figure this out, I'll have to call the competition organizers and let you know what they say." Sighing, he continued, "Seeing as Code Con is in two days, that doesn't give us much time to find a replacement either."

Ramona saw Mr. Delaney briefly glance in the

direction of Ronit's team as he spoke about replacing them and felt frustration surge in her once again.

With another apologetic glance from their teacher, the girls were left to figure this out on their own.

"Who on earth would do this?" asked Lily, breathlessly.

Ramona just stared at the guys, who were now talking to Mr. Delaney. Clenching her fist beneath her desk, she muttered, "I know who would."

In response to Lily's confused look, Ramona clarified, "Ronit's team. What do you wanna bet they had something to do with this."

Lily bit her lip, then shook her head. "Ramona, we shouldn't just jump to conclusions like that. It could've been anybody."

As much as she was frustrated, Ramona knew Lily was right. They couldn't just go around randomly pointing fingers at people. What they needed, she realized, was proof.

Suddenly, Ramona felt a tap on her shoulder.

Turning around, she turned to face —

"Akira! Hey, oh my gosh, take a seat." Ramona said, gesturing to the chair next to her. Akira smiled gratefully and sat down next to her.

"Hey, I overheard you talking to Mr. Delaney. I'm so

sorry, that's terrible. I wish there was something I could do." she said shyly.

"Thank you, Akira," Lily said, sighing. Ramona felt a surge of gratitude towards their new friend. They had been assigned to take care of her, and yet here she was consoling them.

Ramona shook the thought off and twirled her pencil between her fingers listlessly. This couldn't possibly be real. After all their hard work? And who would do this to them? They didn't even have enemies at this school — at least, not to her knowledge.

She dropped her pencil. Sighing, Ramona knelt down to pick it up, when she saw something curious.

"A note?"

Ramona retrieved a small, slightly crumpled sheet of paper from the floor, and unwrapped it. It seemed to be a jumble of random words strung together.

Strange, Ramona thought. The school janitors had come last night, meaning it must've been left early this morning. Suddenly, a revelation shot through Ramona, accompanied by a rush of shock. Could the person who took their code have dropped this?

"Ramona, the camera!" exclaimed Lily, pulling Ramona from her thoughts.

"What?" Ramona asked, looking at her friend confusedly.

Then, following her friend's gaze, she found herself staring at the security camera, newly installed in each classroom at Riverside School.

Gasping in excitement, Ramona exclaimed, "Yes!" They could use the footage of the security camera to track down the culprit!

Ramona bounced out of her chair and gave her best friend an elated hug. It felt good to have hope.

By lunchtime, Ramona's hope had completely fizzled. After class, Ramona and Lily had gone to the office and requested to watch the camera film, but it turned out the cameras were so recently put into place that they hadn't been set up yet, so the

girls had returned dejectedly to class.

In other news, Mr. Delaney had informed the girls that they were still allowed to compete without their code, but that they would be docked points, completely ruining their chance of winning. *At least Ronit's team isn't competing*, Ramona had thought to herself in attempts to cheer herself up.

Now, at lunch, Ramona slowly munched her pizza. Lily was listlessly moving her spoon through her split-pea soup, dejected. Akira sat by them silently, having already finished eating.

Then she heard her name. "Ramona! Lily!" someone called from behind them. It was Tara.

"Guys, I heard the news, that's ridiculous! I can't

believe someone would do that to you both," Tara exclaimed. Her entourage of friends nodded mindlessly behind her.

Ramona smiled sadly at her friend as her eyes wandered towards Tara's friends, who were nodding and murmuring amongst themselves. At this, Ramona struggled to hide her amusement. Tara had more friends than she could count, and half of them probably didn't even care about their code going missing; they just did whatever Tara did. She assumed this had something to do with the latter being so popular.

"Thanks Tara. You're the best." Ramona said, giving their friend a hug.

Tara shook her head angrily. "Just tell me who did

this and they'll never hear the end of it from me."

Ramona and Lily looked at each other, amused. It was great being friends with someone who was so much bolder than them.

"When we find out, you'll be the first to know," Ramona said, shooting their friend a thumbs up.

But before she left, Tara leaned down towards the girls and whispered, "By the way, I heard some of the guys in your grade saying that you guys are making all this up and you're actually just too scared of losing at Code Con."

Tara gave them a pressing glance and left, her entourage of friends trailing behind her.

As Ramona took another bite of her pizza, her eyes found Ronit and Jake, who were sitting at a table nearby. Jake was laughing wildly at a joke Ronit had told, and their friend Nico was preparing to fling a bit of his mashed potato at another one of his friends. Ramona rolled her eyes. *They sure look a lot happier than they did yesterday*, she thought to herself.

Before Ramona could share what had seen with Lily, however, Lauren and Amelia appeared at their table. Ramona looked at them curiously, wondering if they were here to talk about the party.

But Lauren and Amelia stared at them unblinkingly.

"Ramona, Lily, we're so sorry. It was a huge mistake."

# CHAPTER 6 THE INVITATIONS

Ramona dropped her pizza. Lily froze.

Lauren, upon seeing their reactions, shook her head furiously. "No, no, we didn't take your code. It's just... the invitations."

Ramona felt taken aback as she shared a bewildered glance with Lily. How could the party invitations possibly have anything to do with their missing code?

"You know our party on Friday? It's an *all-girls* party," Amelia stressed.

"But my mom is making me invite my brother Jake. Which would totally ruin the whole night. *Boys*," Lauren said rolling her eyes.

"We knew Riverside Code Con was on Saturday and we were hoping that Jake's team would get selected so that he would meet up with his friends on Friday night to practice. That way, he wouldn't be able to come to our party. But when Mr. Delaney chose you guys, well, we were a little disappointed." Lauren admitted sheepishly.

"So we invited you to the party hoping that you

would choose to go to our party instead of Code Con and Mr. Delaney would choose Jake's team to attend. When you didn't accept the invitation, we were sad, obviously, but we would never steal your code or anything. We promise." Amelia said earnestly.

"But if, you know, you don't find your code by Saturday, you're totally still invited to the party." Lauren finished, her face flushed with embarrassment.

There was a long pause. Ramona didn't really know what to think. But, she had to admit, their explanation did make sense. Ramona and Lily hadn't talked to Lauren and Amelia in way too long; an invitation to one of their exclusive parties definitely seemed out of place. But for some

reason, Ramona couldn't rid herself of a lingering feeling of suspicion. Promising herself to keep an eye on them, she spoke up.

"Thanks for telling us," Ramona said solemnly, breaking the silence. "We'll let you know if we find out who's behind this."

Lauren and Amelia quickly glanced at each other, seeming to find this response acceptable, and nodded. The two girls left for their lunch table, whispering to each other, shooting apologetic glances at Ramona and Lily along the way. Akira patted their backs consolingly.

"So... what do you think, Lily? Do you think they were telling the truth?" Ramona asked, eager to hear what her best friend had to say.

Lily paused thoughtfully, brushing a strand of hair out of her face. "Well, that definitely explains why we got the invitations. But I don't know, it still seems weird. It would totally make sense for them to have stolen our code." she said finally.

Ramona nodded, then sighed. The one opportunity she and Lily were able to prove their coding skills to the rest of the school, it was taken from right under their nose.

Why did this have to happen to us, Ramona thought miserably, raising her hand to take another bite of her pizza.

To her increasing disappointment, she found that it had become cold.

## CHAPTER 7 THE SLEEPOVER

"Ramona, scores are up."

Ramona grew wide-eyed and stared blankly at her best friend.

It was the Friday night before Code Con, and Ramona had invited Lily over for a sleepover so that they could practice their presentation a bit more. But what Ramona had forgotten was that Friday also happened to be the day their standardized testing scores came out, the same tests they had taken earlier this week.

Grabbing her laptop, Ramona typed furiously on her keyboard, logging into the school portal.

Clenching her eyes shut, she double-clicked on the grade update entitled "Standardized Testing

Scores" and slowly, she opened her eyes.

Standardized Testing Scores: Ramona Diaz Mathematics - 95th percentile Reading - 84th percentile Grammar - 98th percentile Essay - Comments Attached Below

Ramona breathed a deep sigh of relief. She knew

she hadn't done particularly well in reading, but she was quite pleased with her mathematics and grammar scores. Scrolling down, Ramona saw a scanned copy of her essay with relatively decent comments briefly typed underneath.

Locking eyes with Lily, she asked hesitantly, "Well? How'd you do?"

Lily looked up and gave a brief smile over her computer. "Okay."

Given the lack of angry rambling, Ramona took her friend's nonchalance as a sign that she had aced her exams. Bouncing over to Lily's screen, Ramona realized her judgment couldn't have been more accurate.

"99th percentile in everything, not a mark less.

That's expected, I suppose." Ramona said, rolling her eyes, but grinning at her best friend nevertheless.

"Thanks." Lily returned her grin. She added, "What about you?" After Ramona told Lily the scores she had received, the two girls smiled in relief, glad to be rid of this lingering worry.

After a while, Lily decided to work on practicing the presentation a bit more, while Ramona, who felt her eyeballs had been seared with her lines, lounged comfortably on her bed.

Sighing, Ramona couldn't help but let a small cloud of disappointment linger over her. Tonight was the night she was supposed to be excited to present their app at Code Con. She remembered the countless visits she and Lily had made to each other's houses, researching climate change and, later on, coding in general. They had spent the entirety of their breaks and holidays on their laptops, to Diego's disappointment and frustration, working on Ocean. And now, it seemed as if they had snatched defeat out of the wide-open jaws of victory.

Biting her lip in disappointment, Ramona glanced at Lily, who was currently writing notes on index cards to help her memorize their presentation.

Notes.

Notes.

Gasping, Ramona jumped off her bed and raced to her closet, where she rummaged through her clothes until she found the coat she had been wearing the day their code went missing. Sure enough, the note she had found under her desk was still there, crumpled as ever. Ramona shook her head in disbelief; how could she have forgotten?

"Lily!" Ramona let out a strangled yell. Lily, noting her friend's expression, promptly dropped her pencil and joined Ramona at the foot of the bed.

"What? Did you find something?" Lily asked, raising her eyebrows. When Ramona explained how she found the note, Lily gasped.

"Oh my goodness! We can figure out who stole our

code! We just need to find out whose handwriting that is," Lily spluttered excitedly.

Ramona nodded thoughtfully. "But how?"

The girls sat for a moment, each deep in thought when Ramona's mother knocked swiftly on their door and opened it slightly.

"Hi girls. I thought you might be hungry, so I've made your dinner a bit early," she said, smiling at her daughter and her friend. "It's quesadillas, Ramona's favorite." Her eyes twinkled knowingly.

But Ramona was so enveloped in her thoughts that not even those warm, cheese-filled tortillas could distract her. She promptly spilled her story to her mother, who smiled and nodded. "I'll leave you to it then," Ramona's mother said, placing the platter of quesadillas on the bed and shutting the door.

The girls were silent as they munched their food, each poring over the note trying to decipher anything at all from it.

As they ate, Ramona's radio slipped from songs into a news overview for the day.

"And some exciting news for tonight: artificial intelligence again proves to be an incredible asset to the Hillview National Space Center, which was able to identify a new planet today using a complex machine learning model trained on thousands of astronautical data."

Ramona's eyes widened as the radio droned on.

Reaching over, she increased the volume.

"The model identified signs of previous life on the planet, such as potential water sources. An important step, no doubt, to finding the next habitable planet as climate change wreaks havoc upon our own..."

Ramona locked eyes with Lily, who glanced at her curiously. Opening her laptop, Ramona logged into her school portal and typed for a few seconds, finding her scanned, handwritten essay staring back at her.

Biting her lip, Ramona spoke up. "Lily," she said tentatively. "What if... what if we used artificial intelligence to recognize the handwriting?"

Fifteen YouTube videos and dozens of Google searches later, Ramona thought she finally understood the concept of a neural network. It was just, in fact, a piece of code that would help the computer come to conclusions about large amounts of information.

Sort of like the human brain, Ramona thought to herself.

She stole a quick glance at her friends. Lily was working hard on her laptop, undoubtedly trying to wrap her head around the concept, and Tara, who the girls had video-called for extra help, seemed to be typing away on her computer as well.

Ramona's sudden revelation about the idea of using artificial intelligence to recognize the

handwriting had, at first, seemed like a far-fetched idea. But after a couple of hours of dedicated research, the girls had realized that it might be more possible than they had originally thought.

Ramona and Lily had sent an email to Mr. Delaney asking him for the dataset of all the essays from the standardized testing (minus the comments of course) and the people who wrote them, which solved their problem of obtaining data. He had replied almost instantly, granting them access to the data, wishing them the best of luck on both their mystery-solving endeavor and telling them to contact him with any questions dealing with the coding side of things.

Grabbing her whiteboard marker and board, Ramona ran her hand through her short, black hair and sat up from her computer.

"Okay guys," she said, as Lily and Tara looked up from their laptops at her. "So from what I'm getting, a neural network needs lots and lots of data. And the database of essays that the district collected is perfect!"

"We're going to run our neural network two times. The first time, we're going to *train* it with all of the data from our database. The second time, we're going to *test* it with the picture of the note."

Scribbling two rectangles on her whiteboard to represent this, Ramona took a deep breath and said, "Now, here's the hard part. We need a model, or a piece of code, that learns to recognize the specific features or elements of a person's

handwriting that makes it unique."

"Think of it like a human. In order to recognize the difference between an apple and an orange, we learn through experience. Every time someone mentions an apple, we see them referring to a red fruit rather than an orange one. The computer learns the same way! Only, we need to provide the dataset."

Understanding washed over Tara as she said "But Ramona, I've been looking at coding those models, and that's super advanced and requires a lot more math than even I know," she said, biting her lip.

But before Ramona could respond, Lily smiled at her friend. "You're absolutely right, Tara. But, I think I found something that could help." Lily typed on her laptop for a few seconds, before showing her screen to her friends.

"People have already coded models that we can use! So we can train one of these models using our training data." Lily said.

"And once that's done, we can test the model with the note, and it'll tell us whose handwriting it most likely is," Ramona finished, beaming.

Hope was coursing through Ramona's veins. They could do this. They could win Code Con. All they had to do was run this network.

It was 11:45 pm, way past Ramona's bedtime.

Ramona and Lily had worked together to feed the model the data, after which Lily had promptly gone to sleep in her sleeping bag.

Ramona had wanted to wait a while more for the model to finish training, but it seemed like it would take a long time. Leaving her computer open on her table as it loaded, she stretched. "And now, we wait," Ramona whispered to herself. Laying her head on her pillow, she fell fast asleep.

### CHAPTER 8 THE DISCOVERY

Brrrring.

The blaring sound of her alarm woke Ramona from her deep slumber. Yawning, her hand managed to find the snooze button before she buried herself under the covers once more.

Until she remembered that today was Code Con. Suddenly, last night's events flooded back to her. She and Lily had worked until late at night on their model, which had still been training. But now?

It should be done, Ramona thought. The excitement at being able to finally solve the mystery was enough for her to pull herself out from under the covers.

Launching herself out of bed, Ramona woke Lily, who joined her at the screen of Ramona's laptop from the bedside. Ramona had no clue what to expect. Lauren? Amelia? Ronit? Dozens of possibilities swam through her head as she logged in. But what she hadn't expected to see was:

Loading...30% Complete

**Estimated Time Remaining: 2.5 hours** 

"Thirty percent?!" Ramona nearly yelled. It was barely 5% more than she had left it last night; almost nothing had changed.

"Oh Ramona," Lily said, devastated. "The laptop probably automatically shut down and stopped loading the model!"

Ramona felt like all the hope had been squeezed out of her. She had felt so happy after she and Lily had coded their neural network and relieved at the thought of finally getting to the bottom of their missing code. And now, after all their hard work, they probably wouldn't get to see who took their code until after they presented at Code Con. And even if the model did load, what were the chances that the person who took their code would be at Code Con with them?

Lily, sensing her friend's emotions, nudged her softly and said, "Hey, you know what? It's only 8am. By the time we get on the bus, get our display board set up and answer judge questions, it probably won't even be time to present our app. We have time, Ramona."

Ramona sat in silence for a second and then sighed. She couldn't let this bother her. After all their hard work, it wasn't worth it to throw this opportunity away. They would simply have to give it their best shot, with or without their code, Ramona resolved.

"You're right. Come on, Lils. We should get ready."
Giving her friend a small smile, Ramona hopped
off the bed and headed to the bathroom.

"I can't believe we're actually here." said Ramona, shaking her head disbelievingly but smiling to herself.

Ramona and Lily had joined their friends on the bus at Riverside School for what was a relatively uneventful twenty-minute drive to the Riverside Conference Center. The venue contained a beautiful conference hall where the presentations would take place, and this was where the girls were now setting up, while their classmates indulged in a free breakfast with other attendees in a separate room.

Now, in the conference hall, each of the thirteen teams had their own little booth around the edges, where they were each setting up their display boards. In a few minutes, the judges would begin filing into the room and walk around to each display board, talking briefly with the teams. After thirty minutes, there would be a short break, after which the attendees would be invited to watch the presentations of all competing teams, which would take place at the front of the hall on the large mahogany stage.

Ramona smiled to herself as she switched on the green lights of their display board, at which point she heard many teams audibly gasp.

Their board was gorgeous, the green bulbs absolutely lighting up the conference hall— not too over the top, but perfect. Unable to hide a grin, Ramona locked eyes with Lily, whose face had

flushed happily. There was no doubt about it — Ocean's display board was definitely the best one at the Code Con.

But as much as Ramona felt proud that their display board was undoubtedly the best one, she couldn't help but feel a twinge of disappointment every now and then. If their code hadn't been missing, Ramona was confident that Ocean would have had a decent chance of winning at the Code Con. Without it, Ramona wasn't sure they'd even make the top ten — and there were only thirteen teams competing.

Biting her lip, Ramona returned to the back of their booth, and under the cover of their display board, glanced at her computer, which read:

#### Loading...70% Complete

#### **Estimated Time Remaining: 36 minutes**

Ramona let out a long sigh. There was no hope. Even if the model loaded in time, they would have only twenty minutes of the break to find who had taken their code and get it back. And what if the person refused to give it back to them?

Lily's loud whisper brought her out of her reverie.

"Ramona! They're coming!" she exclaimed, gesturing towards the door as the judges began to file in.

Ramona gasped and felt an onslaught of nerves consume her. Slowly, she took a deep breath to calm herself.

Looking at Lily with newfound resolve, she bit her lip and said with a small smile, "Let's do this."

"And that's time! We will now have a twenty-minute break, during which we will be setting up the hall for presentations. All competing teams can choose to either return to the main lounge for complimentary snacks or remain here. Be back at 9:45am for the pitching round of the contest."

Ramona heard the announcer's booming voice over the hall's quality speakers and felt a surge of anticipation overcome her— not just for their presentation, but also for the prospect of finding their missing code. After the announcements concluded, Ramona's fingers practically flew over her keyboard, logging in, Lily standing right behind her. Surely the model must've loaded by now, she thought to herself. Eyes glimmering with hope, she stared at her computer screen, which read:

Loading...98% Complete

**Estimated Time Remaining: 2 minutes** 

"You've got to be kidding," Ramona groaned, letting her hands cover her face in efforts to cool her heated cheeks. The small, ticking loading icon seemed to be mocking her, and Ramona glared at it stupidly. Lily remained silent, her long hair swishing as she paced back and forth behind their booth.

In attempts to bring her mind away from anxious,

code-related thoughts, Ramona reflected on the

display board expo. Three of five judges had visited

their booth, all three of whom were blown away

not only by the beauty of their board but also of

their app. They seemed to especially love the quiz

feature of their app, which Ramona admitted to

them was her favorite feature of Ocean as well.

Unable to restrain herself further, Ramona's eyes

darted towards her computer screen once again. It

had loaded. Quickly inputting the picture of the

note to test it, Ramona ran the code, Lily peering

over her shoulder.

Then, she gasped.

Tara: 95% match

91

### CHAPTER 9 THE TRUTH

Ramona felt her throat constrict as an overwhelming feeling of sadness and surprise washed over her. This couldn't be true. Tara had helped them with everything and supported them for ages. It couldn't be her. It couldn't be, Ramona thought desperately. But the handwriting had been a match. There was no ignoring that.

For a moment, the girls sat silently beside the

computer screen, their minds whirring with possibilities. Then, Lily voiced what she was thinking.

"But... Tara? She wouldn't!" Lily said, tears glistening in her eyes. Ramona shook her head, absently running a hand through her short hair.

Suddenly, the announcer's voice rung through the hall once more.

"This is a reminder that all attendees have ten more minutes of break until they are due to return for their app demo presentations."

Startled, Ramona jumped out of her seat.

Slamming her laptop shut, she hissed, "Lily, we have to talk to Tara. We're presenting third,

remember?"

Two minutes and a wild sprint later, Ramona and Lily found the room where their class was sitting, chatting absently. Mr. Delaney, noting their arrival, gave them a bewildered glance.

"Girls! What are you doing here, aren't you presenting in a few minutes?" he exclaimed, looking down at them curiously from behind his glasses.

"We need ... to talk to Tara." Ramona said, breathing heavily, her hands on her knees after their sprint. Lily bobbed her head in agreement, looking up at their teacher desperately.

Seeming to sense that something was wrong, Mr.

Delaney didn't press the subject further and directed them towards the girl in question, who was conversing easily with Akira.

As they made her way over to Tara, Ramona felt a twinge of nervousness. What was she supposed to say? Hey Tara, did you steal our code or something? Even in her head, it sounded like a ridiculous accusation to make, especially to her close friend.

Lucky for her, Lily initiated the conversation. Taking the laptop from Ramona's hands, Lily opened it and tapped Tara on her shoulder.

Whirling around, Tara saw them and gave them a bemused expression, similar to that of Mr. Delaney.

"Hey, what are you guys doing he—oh!" she

exclaimed mid-sentence, clapping a hand to her mouth as she saw the computer screen.

Ramona felt her stomach drop as she saw Tara's shocked face.

After a moment of silence, she looked up at the girls, eyes wide, and said, "I would never do something like that. I ... I don't understand."

Ramona and Lily looked at each other, confused.

"What do you mean, you don't understand. Did you," Ramona stammered, unable to finish her would-be accusation. "Did you do it?" she completed, avoiding Tara's eyes.

Tara shot her a hurt look and shook her head.

"I swear."

Looking into Tara's eyes, Ramona could tell she was really telling the truth, and one glance at Lily's sympathetic face told her that she had come to the same conclusion. But Ramona didn't know whether to feel relieved or even more paranoid. Now they were back to square one.

She glanced at Tara, who had turned around and was staring listlessly at the crumpled app summary before her. Crumpled, but also .... ripped.

Ramona's eyes widened as she snatched the summary right out of a bewildered Tara's hands. Then, with her other hand, she reached into her pocket and retrieved the now-crumpled note. She placed the ripped note alongside Tara's summary,

and she gasped.

The two pieces of paper fit exactly together.

Tara and Akira were watching Ramona anxiously.

Lily placed a hand on Ramona's shoulder and
whispered, "But who would've done this? Who had
her paper?"

By this point, Mr. Delaney and a couple of other students had joined the girls' conversation curiously. But Ramona's mind was racing. She thought hard about the day they had turned in their app summaries. Who had had Tara's?

And then she remembered. She had given her and Tara's app summary to someone to turn in. And that someone was —

"Akira," Ramona breathed, not daring to believe it. She turned to face her. Akira's cheeks immediately filled with color as she bit her lip.

Averting eye contact, Akira asked, "What? What do you mean?"

But the guilt was etched all over her face, and Ramona immediately knew that she was the one who had stolen their code. The bubble of frustration that had been building up inside Ramona finally exploded. Akira had been their friend.

"Don't play dumb!" Ramona exclaimed hotly. "I gave you Tara's app summary the other day to turn in to Mr. Delaney. You're the only one who could've done anything with it!"

Lily's eyes widened, and Tara's jaw dropped.

Tears streamed down Akira's face, as she began to sob, "I'm so so sorry. I wish I hadn't done it. I just .... my dad ... climate change ... business..."

As Akira rambled, Ramona couldn't help but feel aa twinge of regret for her heated accusation. But any sympathetic feelings were drowned by her anticipation for an explanation, so she interrupted, "Akira, calm down, you're not making any sense."

Lily patted Akira on her back soothingly, and this consoled Akira enough for her to take a few deep breaths and then launch into her story.

"It ... it all started with my dad I guess," Akira sniffed. "The day Mr. Delaney introduced me to

you guys, I was super excited because I finally found friends at this school. I didn't really know anyone else at Riverside before you guys." Akira looked at them sadly.

"So I went home and I was telling my dad all about my new friends, and then the topic of your app came up. I told him all about it, and he stiffened, and immediately I knew I shouldn't have." Akira looked down at her hands.

"You see, my dad runs one of the biggest oil companies in the world, and climate change advocacy is bad for his business. And one of his biggest potential customers was coming to Code Con. If they found out that his daughter's friends were associated with climate change advocates ... well, you can see how that would be bad for his

brand."

"And so he got really angry and told me to stop being friends with you guys. But I didn't want to do that, I barely know anyone else. So he told me that it was either that or I take your code." A fresh set of tears streamed down Akira's face. Ramona and Lily both gasped.

Mr. Delaney's eyes widened in surprise. "And I presume this is why he called me repeatedly to have Ocean pulled from Code Con?"

Ramona, even more shocked, turned to her teacher with dawning realization and said, "That's who you were talking about the other day in class? The people who didn't want us going to Code Con?"

At her teacher's confirmation, Akira wiped the tears from her cheeks and nodded.

"My dad forced me to do it, and I really really didn't want you guys to hate me. So when Ramona gave me Tara's app summary, I knew there was a chance you'd think it was Tara and not me if I left a piece of it under your desk." Cheeks reddening in shame, Akira whispered, "Please forgive me."

Upon seeing Akira's embarrassed, stricken face, Ramona couldn't help but feel a little sorry for their friend. She was about to forgive her when —

"This is a reminder that all attendees have one more minute of break until they are due to return for their app demo presentations. Thank you." The announcer's voice boomed over the speakers, and Ramona's heart was thumping wildly. Akira, eyes widening, quickly retrieved a small USB from her pocket.

"Here, take it! It has the code," she said, tossing the USB to Ramona, who caught it deftly and looked at her anxiously.

"But your dad —"

"It's ok, I'll deal with it," Akira said, offering them a watery smile. "Good luck."

Lily and Ramona looked at each other and quickly hugged their friend before dashing off to the stage.

Adrenaline coursing through her veins as she

sprinted, Ramona felt a mixture of bewilderment, shock, and relief. One thing was for sure: this was not the way she imagined spending Code Con.

# CHAPTER 10 THE CODE DETECTIVES

The bells of Felicity's ice cream shopped jingled cheerfully as Ramona, Lily, and their families made their way inside. Beaming ear to ear and still dressed in their blazers, Ramona and Lily were clutching a sleek, gold first-place trophy in their arms.

Upon their arrival, Felicity smiled warmly at them,

before seeing the trophy. Eyes widening, she asked, "Does this mean what I think it does?"

Ramona laughed at Felicity's shocked expression and nodded. "We won Code Con!" she exclaimed happily as Lily rested the trophy on the counter so Felicity could have a better look.

"Congratulations girls! That's amazing." Beaming at them, she prodded, "Well, order up. After you're done, I'll take my break, and you can tell me all about it."

After a few minutes, when everyone had received their ice creams and had sat down at a large booth, Ramona and Lily dove into the tale, taking turns talking while the other devoured their ice cream.

Ramona explained how they had talked to Akira after the competition, and how they had met her dad back at school. Smiling happily, she explained how they managed to convince her dad to accept their friendship with Akira; he had relented, admitting he had been much too caught up in his work to consider his daughter's feelings.

Lily talked about how they had reconciled with Tara, who was sympathetic towards them, and finished their tale by talking about how shocked they had been when the announcer had called their names as the winners of the competition.

"It was crazy," Ramona put in, grinning as she remembered the thrill of excitement she had felt as she and Lily walked up on the stage to accept their awards.

"And so here we are," Lily said, beaming around at everyone.

A moment of silence followed, and then:

"Wow, you guys aren't just coders, you're code detectives!" Felicity exclaimed, to everyone's laughter.

"The Code Detectives - using code to solve mysteries!" Ramona said grinning at Lily.

"I love it!" Lily said, returning Ramona's grin.

Spooning chocolate ice cream into her mouth,
Ramona looked around contentedly at her family
and friends. She wanted to remember this happy
moment forever.

Suddenly, she felt a tug on her sleeve.

Diego's bright, round face was grinning up at her. "Hey, you're a Code Detective right? Then help me solve this mystery. Who's going to play basketball with me tonight?"

Rolling her eyes, Ramona laughed along with everyone. Grinning, she replied, "Us! The Code Detectives versus Diego. Let's see who wins."

And though The Code Detectives lost unsurprisingly to Diego's unbelievably good basketball skills, Ramona couldn't but feel that today, everyone had won.

Read an excerpt from book 2 of

the code detectives

### excerpt

Stretched peacefully on the sofa, Ramona snapped her book shut and sighed happily. She *loved* detective stories — almost as much as she loved coding. And the book she'd finished had definitely lived up to her expectations, with her favorite character managing to crack the case just in time.

No sooner had she set her completed book on the side-table, the doorbell rang.

"Mija, can you get that?" Ramona's mother's voice floated down the hall.

Groaning, Ramona reluctantly pushed herself off the sofa. Once she had made her way to the door, she peered through the peephole curiously. Unable to see anything, Ramona pulled it open.

In the waning light of the sun, Ramona could barely see, so she squinted her hazel eyes until she could make out a disheveled young boy in front of her, panting wildly.

"Ramona, I need your help.

# Keep Up With Ramona, Lily, and Their Adventures!

social media:

**ecodedetectives** 



#### ABOUT THE AUTHOR

Ria Doshi is a junior in high school excited about using artificial intelligence to solve global issues.

She has worked on several catalyzing projects using artificial intelligence and loves mentoring students to take on technology. Passionate about inclusivity and diversity in the field, she plans to use The Code Detectives to encourage underserved communities to learn more about the interdisciplinary nature of artificial intelligence.