FUTURE CAS FELLOWS

An Interview with Jason Russ, VP of Admissions

By Emily Miske, ACAS

In this insightful interview, Jason Russ, vice president of Admissions at the CAS, shares his perspectives on the evolving landscape of actuarial exams and candidate preparation. With over 27 years of involvement with the CAS, Russ discusses the importance of supplementary study materials, the integration of predictive analytics and data science into the education pathway, and the shift towards computer-based testing. He also highlights the significance of project-based evaluations in developing practical skills and ongoing efforts to enhance the candidate experience. This conversation provides valuable insights for current and future CAS candidates navigating their actuarial credentialing journey.

The following transcript has been edited for length and clarity. The full interview can be found online: https://tinyurl.com/CASFutureFellows.

CAWG: Can you share something about yourself that candidates might not know?

Russ: With respect to the CAS, I've been involved with the syllabus and exam committee in some capacity for over 27 years. I've been involved in this a long time, so I've seen a lot of things since I was a writer, a grader, and on a pass mark panel. I was the chair for an individual exam, and I was the chair for the whole committee. Then I was a Board member and on the board committee overseeing the governance of admission. I've seen admissions from a lot of angles for many, many years and bring those perspectives to my current role.

Outside the CAS, I like to spend time ballroom dancing. In my younger days, this was a serious hobby. I would train for 10 hours a week and travel all around the U.S. and to other countries doing competitions with my dance partner, who's now my wife. Now we're still doing a bit of dancing just for fun and to stay active.

CAWG: We've seen some recent content outline updates, such as the expansion with PCPA, as well as some updates to the MAS exams and Exam 8 that really focus on predictive analytics and data science. How do you think these changes help prepare candidates for actuarial roles of the future?

Russ: One of the pillars of the CAS Strategic Plan is to ensure that our actuaries are building the skills needed for their future work. These changes with respect to predictive analytics and data science are a great example of how we're addressing that. Actuaries need to be able to work with large sets of detailed data. Years ago, if I were doing a reserve assignment for a client, the data I received might be limited to just aggregate loss triangles and information on premium and rate changes. That's very rarely the case now.

Now it's very typical to receive databases with the details for every single policy written and every single claim received, with a large number of fields for each. That's a lot of data that we didn't have to deal with in the past.

There are skills actuaries need to work with such large datasets — to read the data, to review it, to query it to understand what's there; actuaries need to test the data and address issues that arise regarding data quality. Then actuaries need to actually use this data. This could mean using a GLM to identify loss cost drivers, producing visualizations to help explain trends, or many other things.

The actuaries on my team at Milliman dig into things like is there a change in the business mix that drove a change in the claim frequency or are there different types of claims emerging that

Advice for Attending First CAS Meeting

By Liping Yang, ACAS

Congratulations on earning your letters! You've worked hard to reach this milestone, and now it's time to celebrate. Attending your first CAS meeting, whether it's a Spring meeting or the Annual Meeting, is an exciting way to mark the occasion. It's a fantastic opportunity to expand your professional network, learn more about the field, and make new friends. But it can be both exciting and overwhelming. You'll receive instructions emails from CAS, get tips from coworkers, and still find yourself unsure of what to expect. I've been in your shoes, and I hope these tips help you make the most of your first meeting.

Book your hotel early

Reserve your room as soon as possible to secure accommodations at the conference hotel before the room block fills up. While overflow hotels may also offer discounted group rates, commuting back and forth can be inconvenient. Even if you're unsure about your exact travel plans, it's a good idea to book Sunday through Tuesday nights at the main hotel. You can always adjust your reservation later.

Read every email from CAS

After registering, you'll start receiving emails from the CAS meeting organizers. It may be tempting to ignore repeated reminders, but each message often contains new information or updates. Pay special attention to emails with sign-ups for special events, such as a webinar for new associates and new fellows about a month before the meeting, special events for new associates or new fellows at the reception, volunteer activities during lunch sessions, or speed networking sessions. These are especially beneficial for first-time attendees.

Download the app and plan for concurrent sessions

Be sure to download the meeting app, which includes session descriptions, speaker bios, and venue maps. I highly recommend attending all featured and general sessions. For the concurrent sessions that are held at the same time, planning is key. As a new associate, you may be tempted to choose topics closely related to your current work. However, this may not always be the most valuable choice, as some sessions are designed as general overviews and may not offer much for those with experience in that area. So don't choose sessions based only on titles. Review their descriptions and read the slides, if available, to determine whether it's an overview or a deep dive. I strongly recommend attending sessions in areas you're curious about but less familiar with. It's a great opportunity to expand your knowledge and ask questions.

Roundtables are gold

If a roundtable catches your interest, I strongly encourage you to attend it rather than a presentation. Roundtables are interactive, small-group discussions focused on peer learning. You'll be more engaged in active conversations and have more opportunities to ask questions. They're perfect for sharing experiences and networking in a more informal setting. Some roundtables are specifically geared toward new associates.

Reception and Tuesday night out

The large receptions can feel a bit overwhelming, especially if you're attending alone or are new to networking. If that's the case, start with the special reception for new ACAS or new FCAS. It's a more relaxed and welcoming environment specifically designed to help you meet others who are also new to the meeting. CAS staff and Board members often attend and are happy to chat. One thing to remember is that this is a reception, not a full dinner. Also, new associates may have their group photo taken afterward, so wear your nicest outfit!

The Tuesday Night Out is a major highlight of the meeting and not to be missed. It's a fun, social evening typically hosted at a local restaurant or unique venue, with dinner, music, games, and other activities. It's a chance to unwind and socialize in a lively atmosphere. There may even be a theme for dressing up. Even if you're not big on dancing or social events, it's worth going. Many lasting friendships and professional connections are formed during this night.

Things to bring

- Business casual for general sessions and most events.
- Bring a jacket. Conference rooms are often chilly.
- Bring a laptop if you plan to attend a workshop or case study that requires one. Check the session details in advance. Some clearly state if a laptop is needed. I once saw a packed AI workshop where only a few attendees brought laptops, which limited participation.

New member recognition deferral policy

New members are formally recognized at the next scheduled in-person CAS meeting after receiving their credential. Recognizing that not all new members may be able to attend that meeting, the CAS offers a **one-time opportunity** to defer recognition to the **next immediate in-person meeting** following their originally scheduled recognition date. Please note that deferrals are limited to one opportunity only, and members cannot select a meeting of their choice. To request a deferral, members must complete and submit the New Member Recog-

An Interview with Jason Russ, VP of Admissions

drove changes in claim severities? Investigating those changes and then incorporating any conclusions from such investigation into the actuarial analysis is vital to producing a high-quality work product. And it's only going to become more important in the future.

CAWG: Regarding the new PCPA exam and project, this is the first time the CAS has used a project-based testing approach. How does that project-based evaluation approach support the development of new skills for candidates?

Russ: There are several different skills that this approach will highlight. This project-based exam will allow candidates to demonstrate their abilities in a way that cannot be done using traditional exams. Candidates are not just going to talk about how to build a model or what they would look at in a model or how they would interpret model output. They're going to actually do the modeling.

It's moving from theory to practice, which I think is a really great step in our exam process.

We need to know that not only do candidates understand the principles, but that they can actually do the work.

This came about from a very clear directive from the CAS Board a few years back: we need to build skills for the future. And this was viewed as a must – to make sure that all actuaries can build models.

On top of that, candidates will need to write a report that describes their work, thus going beyond merely testing skills. They also must clearly identify the rationale for creating the model, discuss the relevant business decisions to be made, etc., demonstrating their ability to be more than just technical support but also businesspeople, decision-makers, and influencers. These roles require certain soft skills, such as communication skills, presentation skills, and problem-solving skills. Those skills are difficult to assess using traditional exams, but they can come through in a project environment like this.

CAWG: Any closing thoughts to share with candidates?

Russ: Thank you for the opportunity. One thing we haven't touched on is how our exam committee and leadership are much more in touch with the Candidate Advocate Working Group now than ever before. I think that candidates should understand that. Candidates can use that stronger relationship to feed any comments and perspectives through the CAWG. That's a great way for us to hear what our candidates are really thinking. **f_f**

How to Take Effective Study Breaks

By Kathleen Smolak, CAWG Candidate Representative

Are you consistently feeling burned out despite taking frequent study breaks? You may need to consider whether your study breaks are effective.

Are these examples of effective study breaks?

- Taking a walk while thinking about which topics you'll study when you get back from your study break.
- A 10-minute phone break to see what's happening on the actuary subreddit.
- Playing your favorite game while thinking to yourself, "I am going to be so refreshed and ready to keep studying after this."

For study breaks to truly be helpful, try to find activities that you enjoy and take your attention away from exams. Almost anything can be a break when you are focused on what you are doing instead of worrying about your upcoming exam sitting.

Consider these alternatives to the examples above:

- Taking a walk while thinking about the dogs you walk past, or your own dog, or how you really want to get a dog. What kind of dog do you want?
- A 10-minute phone break to see what's happening in your area this weekend or to find a new book to read.
- Playing your favorite game while thinking about your strategy, what you want to do next, or where you want to find your next quest.

The actuarial exam journey is not about studying or thinking about studying 24/7 – for many of us, the key is balancing quality studying with effective study breaks. **f_f**

Advice for Attending First CAS Meeting

nition Deferral Form. Verbal or email requests are not accepted.

For example, a member originally scheduled to be recognized at the 2025 Annual Meeting in Austin may request to defer recognition to the 2026 Spring Meeting in New York City. Deferring allows participation in the in-person recognition activities at the 2026 Spring Meeting, including New Member Receptions, New Member Photos (featured in *Actuarial Review*), Celebration of New Members Ceremony, and other exclusive new member activities. However, you will remain part of the 2025 Annual Meeting new member class per CAS records. As a result, your name will not appear in the 2026 Spring Meeting printed program or related meeting materials.

Don't stress too much about doing everything. You're there to learn, connect, and celebrate your accomplishment. Be open, ask questions, and don't hesitate to introduce yourself. You'll be surprised how welcoming the CAS community is.

Enjoy your first CAS meeting! **f_f**

What Is Large Account Pricing?

By Curt Glatz, ACAS

It's pricing for large accounts, end of story.

I am only half kidding, since the name does give it away, but why is there a distinction between other forms of actuarial pricing and large account pricing?

What separates a large account from other kinds of risks is the volume of the insured's historical data. A large account has enough loss data that its premium can be priced based on its own loss experience rather than being pooled with other accounts. Typically, these accounts have hundreds to thousands of claims over the past several years, with severities ranging from a few hundred dollars to millions of dollars. Rather than being a question of whether the account will have a claim, it's a question of how large their claims will be. Some common lines of business that use this pricing are professional liability, commercial general liability, and commercial auto liability.

The next big difference between traditional policies and large account policies is how the policies are structured. A typical insurance policy needs little explanation. An insured purchases a policy from an insurer with coverages, deductibles, and limits outlined, and the insurer pays whenever there's a claim.

A large account policy is much more complex. The policy is purchased through a broker. The policy is structured as a **tower** made up of **layers**. The layers represent the portion of a large loss an insurer agrees to cover. Multiple insurers are involved in the tower (e.g., Insurer A covers losses within layer 1, Insurer B covers layer 2, etc.). Each layer has a per-occurrence limit (i.e., the most the insurer will pay per claim) and an aggregate limit (i.e., the most an insurer will pay in a year). Insureds will often have a **self-insurance retention (SIR)**, which is similar to deductible. Lastly, these policies are usually either written on a **claims-made basis** or an **occurrence basis**, which dictates whether losses are covered on a report-year basis or an accident-year basis (as you may remember from Exam 5).

These types of accounts are easier to understand through an example. Suppose a large account policy has 10 layers. Each layer has a $5 million per-occurrence limit and a $5 million aggregate limit. The insured also has a $1 million SIR that will pay $1 million on each and every loss.

Figure 2 shows the insured's claims for the policy year.

The 50 claims under $1 million would be fully covered by the insured because their severities are below the SIR.

This leaves 11 claims with a combined incurred amount of $71 million. Figure 3 shows how the insured and insurer pay for these claims.

The insured is responsible for the first $1 million of each loss, which ends up being $11 million of the $71M. Next, the insurers are responsible for 10 layers of $5 million, which ends up being $50 million of the $71 million. This leaves an extra $10 million that the insured is responsible for.

Now if the $51 million claim never occurred, there would be 10 claims with a combined incurred amount of $20 million. Below shows how the insured and insurer pay for these claims.

Same as before, the insured is responsible for the first $1 million

Figure 1: Tower Structure

Outside (insured possible)
Layer 10: 5M/5M xs 45M xs SIR
Layer 9: 5M/5M xs 40M xs SIR
Layer 8: 5M/5M xs 35M xs SIR
Layer 7: 5M/5M xs 30M xs SIR
Layer 6: 5M/5M xs 25M xs SIR
Layer 5: 5M/5M xs 20M xs SIR
Layer 4: 5M/5M xs 15M xs SIR
Layer 3: 5M/5M xs 10M xs SIR
Layer 2: 5M/5M xs 5M xs SIR
Layer 1: 5M/5M xs SIR
SIR: 1M (each and every loss)

Figure 2: Claim Information

Claim Severity	Claim Count
<$1M	50
$2M	10
$51M	1

Figure 3: Insured/Insurer Obligations for Claims >$1M

Layer	Insured Obligation	Insurer Obligation
Outside	$10M	$0
Layer 10: 5M/5M xs 45M xs SIR	$0	$5M
Layer 9: 5M/5M xs 40M xs SIR	$0	$5M
Layer 8: 5M/5M xs 35M xs SIR	$0	$5M
Layer 7: 5M/5M xs 30M xs SIR	$0	$5M
Layer 6: 5M/5M xs 25M xs SIR	$0	$5M
Layer 5: 5M/5M xs 20M xs SIR	$0	$5M
Layer 4: 5M/5M xs 15M xs SIR	$0	$5M
Layer 3: 5M/5M xs 10M xs SIR	$0	$5M
Layer 2: 5M/5M xs 5M xs SIR	$0	$5M
Layer 1: 5M/5M xs SIR	$0	$5M
SIR: 1M (each and every loss)	$11M (11 x 1)	$0
Total	$21M	$50M

Figure 4: Insured/Insurer Obligations for Claims >$1M (excluding $51M claim)

Layer	Insured Obligation	Insurer Obligation
Outside	$0	$0
Layer 10: 5M/5M xs 45M xs SIR	$0	$0
Layer 9: 5M/5M xs 40M xs SIR	$0	$0
Layer 8: 5M/5M xs 35M xs SIR	$0	$0
Layer 7: 5M/5M xs 30M xs SIR	$0	$0
Layer 6: 5M/5M xs 25M xs SIR	$0	$0
Layer 5: 5M/5M xs 20M xs SIR	$0	$0
Layer 4: 5M/5M xs 15M xs SIR	$0	$0
Layer 3: 5M/5M xs 10M xs SIR	$0	$0
Layer 2: 5M/5M xs 5M xs SIR	$0	$5M
Layer 1: 5M/5M xs SIR	$0	$5M
SIR: 1M (each and every loss)	$10M (10 x 1)	$0
Total	$10M	$10M

Transferable Skills for New Actuaries

By Eugene Itskovich, FCAS

Whether you are a college student aspiring to be an actuary or a career changer looking to break into the field, there are skills that you already have or can work on to set you up for success. Math and statistical knowledge are prerequisites for the profession, and you will be tested on those through the actuarial exams. There are other skills that will help you succeed in the profession thatyou may already have or can work on developing. These skills won't be directly tested on an exam, but they will help make you stand out from the pack.

The skillset that most differentiates actuaries is communication. When I was younger, I thought I could avoid writing and communicating when entering the profession, but the older me realizes that couldn't be further from the truth. The most successful actuaries I've seen are able to clearly articulate their assumptions, concisely share their results, and appropriately explain their analysis to the target audience. Actuaries will often find themselves in a position where they have to communicate results to a client, a regulator, or stakeholders within their own company. Presenting with confidence and owning a reputation for quality work will make it easier for others to agree with your analysis. There are lots of avenues to improving your communication skills. For example, you can join a local Toastmasters club or practice in a speech/debate club at your university. Finding opportunities to practice an important presentation with someone unfamiliar with your work is a great way to get an outsider's perspective.

Programming skills are becoming more important in the profession and are a differentiator for those looking to enter the profession. From my experience, R and Python are becoming essential languages to understand. They are open-source languages and can be used for many different tasks, such as visualizations or building GLM models. They can also be used to automate tasks and cut down on mistakes. Both languages have packages that implement actuarial methodologies, such as the Chainladder package, which can be used to produce high-quality loss development analyses. The best part about these languages is that you can practice them on your time because they are open source. Unlike proprietary languages that have expensive licenses attached to them, you can quickly get them set up on your computer and try to make your own project. There are lots of helpful resources and training materials out there to guide you. Even if your current job or classwork uses different programming languages, having knowledge of one will enable you to quickly pick up another.

Proofreading and double checking your work is another important skill to work on. Taking that little bit of extra time to review your work can go a long way to helping establish your credibility as you start out in the profession. As an actuary, you might be analyzing a client's data or developing a binding quote. High accuracy will be rewarded and can help you avoid the awkward experience of sending a follow-up to correct your work. You likely are already doing this today, and it's a habit that will carry over into the actuarial profession. A good practice I've seen is to cross-reference your work with another trusted source you have access to in order to check for reasonability. Perhaps there is an internal report you can run and compare that to the results of your query. Developing your own formulas to check your work can also help catch errors. If you're segmenting your premium in your analysis, a quick sum across all segments and comparing that to your original data can help to make sure you didn't duplicate or drop observations. Finally, peer review other's work to get some ideas for what you can incorporate into your own analysis and to gain intuition.

Collaboration is also often required in the profession. In actuarial work, there is never going to be one definite answer. Often there will be a range of reasonable answers to choose from, and two actuaries will reach different conclusions utilizing the same data. In my own experience, it's best to do a combination of defending your selection, agreeing with another actuary's selection, and sometimes proposing an alternative that lies between your picks. Defending your own selection gives you a chance to rethink your assumptions and articulate your knowledge to the other actuary. Other times, it's good to go with what the other actuary suggested as they bring different viewpoints and experiences that can aid in the final analysis. Sometimes if you and the other actuary appear dead set on your choices, proposing something in the middle is a good way to incorporate both viewpoints. By doing so, you will be considered a team player, and that will go a long way in managing office relationships. A great way to develop your collaboration skills is when you have a group project at school or with your colleagues. You will come across times when you disagree on direction and where to go next; that is a great time to compromise, so everyone can contribute to the final product.

Most transferable skills needed to succeed in the actuarial world are soft skills. The path to mastering these skills isn't always clear, but they are skills you have likely been working on and will continue to improve. Some of these skills can help you pass the actuarial exams. Clearly communicated answers will help graders assess your response. Double checking your work will weed out mistakes. You need to have programming knowledge to pass the recently introduced Certified Specialist in Predictive Analytics (PCPA) exam. Exams can get you started in the profession, but transferable soft skills can truly make a difference in success throughout your career. f𝒇

Insurance for AI?
AI Risk: An Actuarial Opportunity

By Daniel Drabik, ACAS

Imagine a one-person startup, fully reliant on AI platforms, collapses due to a chain of unchecked errors, turning an initial tiny AI error into total catastrophic loss. Who is responsible? How can policyholders be protected from risks associated with AI use? As the recent releases of GPT-5, Grok Imagine, and Genie 3 demonstrate, AI capabilities continue to accelerate, as do its risks. Karthik Ramakrishnan, leveraging his tech tenure and working alongside Dr. Yoshua Bengio (considered by many a godfather of AI), founded Armilla AI to specialize in risk identification, mitigation, and transfer for AI systems, using advanced model validation and predictive analytics to facilitate trust and robust underwriting. In this interview, discover how actuaries (both credentialed and emerging) are uniquely positioned to validate models, forecast failures, and identify insurance strategies that will manage AI risks and expand the profession into the AI frontier.

What was your thought process that led to connecting insurance with AI risk(s)?

After having been in tech for many years, I had the opportunity to build true AI applications in various industries in 2017–2019, with Dr. Yoshua Bengio. During that time, a lot of feedback from clients was that these (AI) systems were not flawless; they are probabilistic and, thus, contain errors. How can a company relinquish control to such machines when they are flawed at the start? Despite this, my thesis was that many currently existing processes will be intelligently automated. While intelligently automated, these processes risk a domino effect. That was one aspect. The other aspect became clear when I casually shared my thesis with friends who worked in the insurance industry. They shared how, if my thesis was true, at some point the insurance industry would need to reconsider how to underwrite a company. While the external coverage or exposures may not change, the source of the risk (AI) and the risk factors would be different; the risk profile would be different; and actuarial models would need to be adjusted and re-underwritten. That is where the connection was made. I never considered insurance before then, but that emerging risk was real. So real, in fact, that I concluded: AI needed insurance.

Can you expand on the risk of AI processes causing a domino effect and explain why this could be an opportunity for actuaries?

As AI systems gain traction, more companies are using them

Insurance for AI?

extensively. An extreme case could be a solo-founder company that relies entirely on AI tools to operate. If any AI system makes an error, it could trigger a domino effect; a small mistake in one AI could compound across others. Imagine an AI adding an extra zero to a $10,000 insurance claim, making it $100,000. If that error flows through other AI processes, the consequences could be very material. AI's probabilistic design guarantees occasional failures, raising the question of liability (potentially devastating a small business). So, with widespread AI adoption, these risks become tangible, and insuring against such risks is crucial, presenting an opportunity for actuaries to contribute value.

How can actuaries play a role and build trust in AI systems?

Actuaries are trained to see the math behind a model. Building trust in AI systems is the most immediate problem that needs to be solved. That's where actuaries can help. Actuaries can assist with model validation and model testing (e.g., model assessment across multiple dimensions, such as bias) so that companies can understand 1) how the model is going to fail and 2) the impact that would have. Can we get comfortable with being able to predict how a model is going to fail? A key component to being confident in this is data, and a lot of data is needed.

If you could share only one key message with the actuarial community about AI insurance, what would that be?

AI is a very technical risk, and managing this risk overlaps with the education of an actuary in a lot of ways. Actuaries can bring all their skills together to look at a client model and say, "I get this risk," and assess the level of risk associated with a model. Technical skillsets are critical to assess an AI system and project how the system could fail; actuaries are well suited for this.

Ramakrishnan's vision shows how actuaries can expand their roles from traditional risk assessors to "AI guardians," forecasting failures and pricing AI risks with precision to facilitate trust in AI technologies and protect businesses from the unknown. AI risk isn't merely an emerging niche; it's a chance for actuaries to increase their impact. f_f

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What Is Large Account Pricing?

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of each loss, which ends up being $10 million of the $20 million. However, because layers pay out in order, only insurers in the first two layers are obligated to pay the remaining loss amounts.

Something you may have noticed in the example is that loss experience seems to wane higher up the tower (i.e., small losses happen more frequently than large losses). Losses are often modeled using a Pareto distribution to account for the decrease in losses higher up the tower. There are a few ways to price the higher layers where experience is limited. A common method is to use ILFs (as learned on Exam 5 and Exam 8). Another way is to combine the insured's data with industry benchmark data at a point where the insured's data become thin. In the previous example, that point would either be $1 million or $2 million.

To answer the question of "why use large account pricing," this method of pricing allows for insureds to a pay a premium that better reflects their loss experience. By sharing the tower with other insurers, it makes insuring these large entities less risky for each insurer and insurance more affordable and available. **f**f

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The CAWG can be reached at cawg@casact.org.
Applications to join the working group as a candidate
representative are accepted on an annual basis.
This year's applications will be accepted through
September 30, 2025. More information can be found
on the CAS website.