



Actuary 103

Leveraging AI for Actuarial Recruitment Success

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Discussion Points



Actuary 101



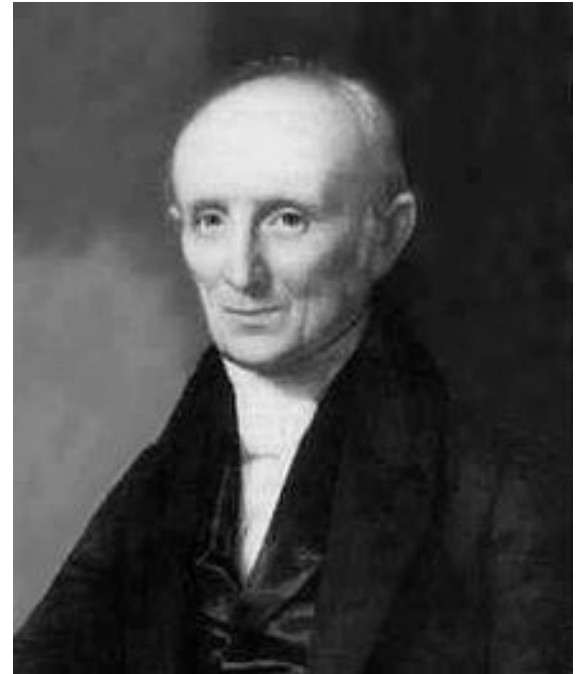
Recruitment Preparation
with ChatGPT



Q&A

What is an Actuary?

- A business professional who deals with the financial impact of risk and uncertainty
- Analyzes, manages and measures the financial implications of future risk
- Develops and validates models and communicate results to guide decision-making
- “Calculates the price tag on risk transfer”



Area of Work

- Insurance Industry
 - Property and casualty (P/C)
 - Life and annuities
- Employee Benefit Industry
 - Retirement benefits
 - Health benefits
- Financial Services Industry
 - Banks, investments, risk management
 - Mergers & Acquisitions
- Government
 - Social Security
 - Regulation of insurance companies

Professional Exams and Study Benefits

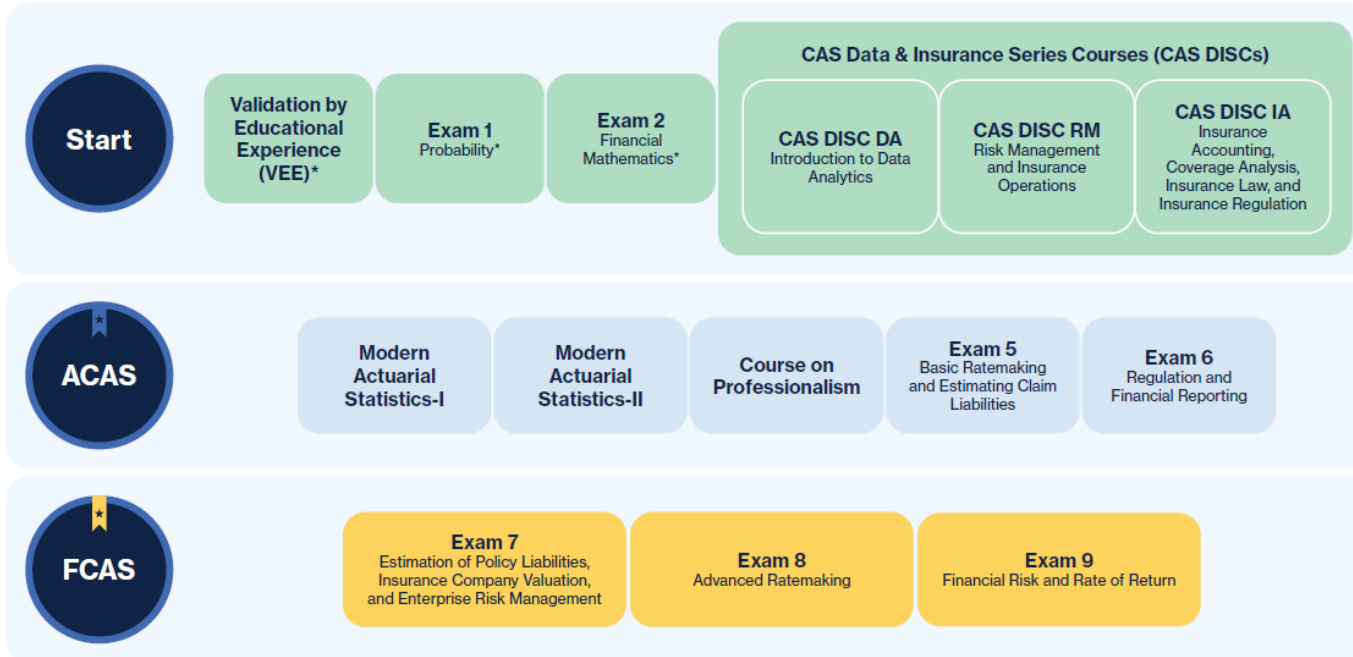
- ~10 Actuarial exams plus various modules, depending on the path.
Typically 6-12 years to complete
- Paid Study Time (100 – 120 hours per exam is not uncommon)
- Raises or bonuses for each exam (\$3,000 - \$5,000 range), and for each designation (\$5,000 - \$7,500)
- Company pays for exam materials, seminars, exam fees, etc. (roughly about \$2,000 - \$5,000 cost/exam)

CAS 2023 Syllabus to FCAS



Educational Journey 2023

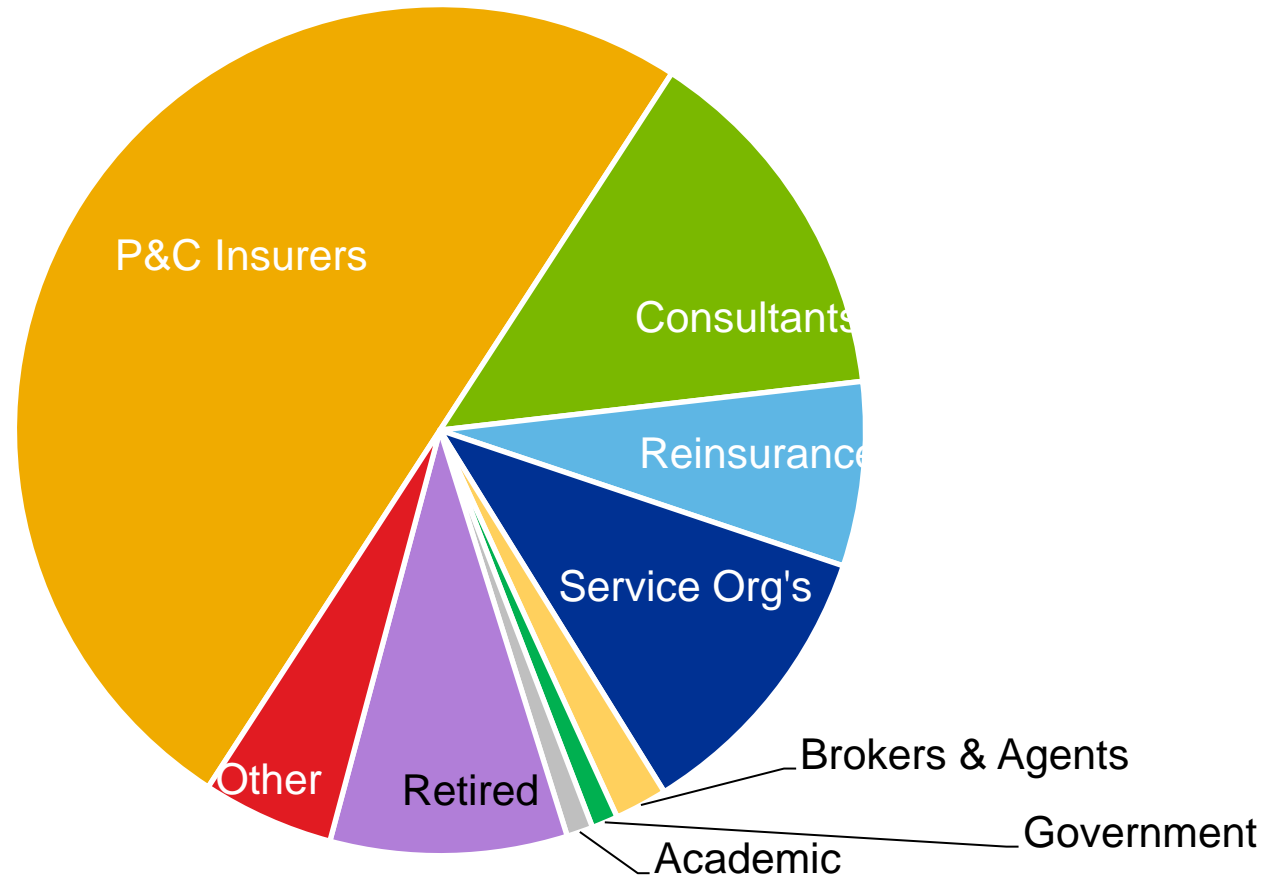
Actuarial candidates must pass a series of exams to become credentialed property and casualty actuaries and CAS members. The requirements outlined here will help guide you to the highly coveted Associate (ACAS) and Fellow (FCAS) designations.



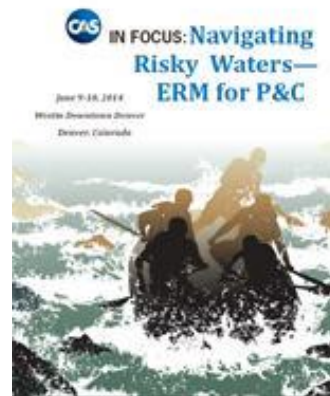
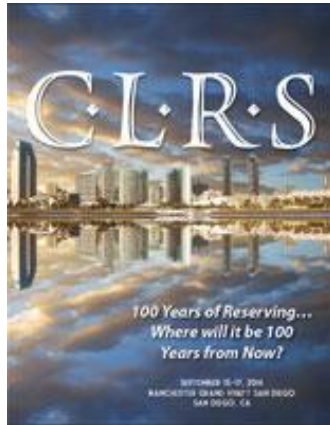
**The CAS will grant waivers for candidates who pass examinations offered by other organizations that cover our CAS learning objectives.*

For more information, visit casact.org/credential-requirements.

CAS Members by Type of Employment



What do Property/Casualty Actuaries do?



- Ratemaking
- Reserving
- Capital Adequacy
- Reinsurance
- ERM
- Trends

Top Employers of CAS Members

Company or Organization	Number Employed	% of CAS membership
Liberty Mutual	434	4.6
Zurich (including Farmers)	251	2.7
Travelers	246	2.6
Intact (including OneBeacon)	198	2.1
Marsh (including Guy Carpenter & Oliver Wyman)	191	2.0
Allstate	184	1.9
Chubb	178	1.9
Willis Towers Watson	175	1.9
AIG	148	1.6
Milliman, Inc.	130	1.4
The Hartford	130	1.4

Other Actuarial Companies in Various Fields

- PC:

- Traveler, Chubb, Applied Underwriter, Berkshire Specialty, AIG, AAA, State Farm, Farmers, Zurich, Munich re, Swiss re, Modern America, CNA, Hartford, ISO, NCCI, WCIRB, nationwide, USAA, Liberty Mutual, etc.

- Life:

- Pacific Life, MetLife, NY Life, AIG (Corebridge), Transamerica, Prudential, Mass Mutual, etc.

- Health:

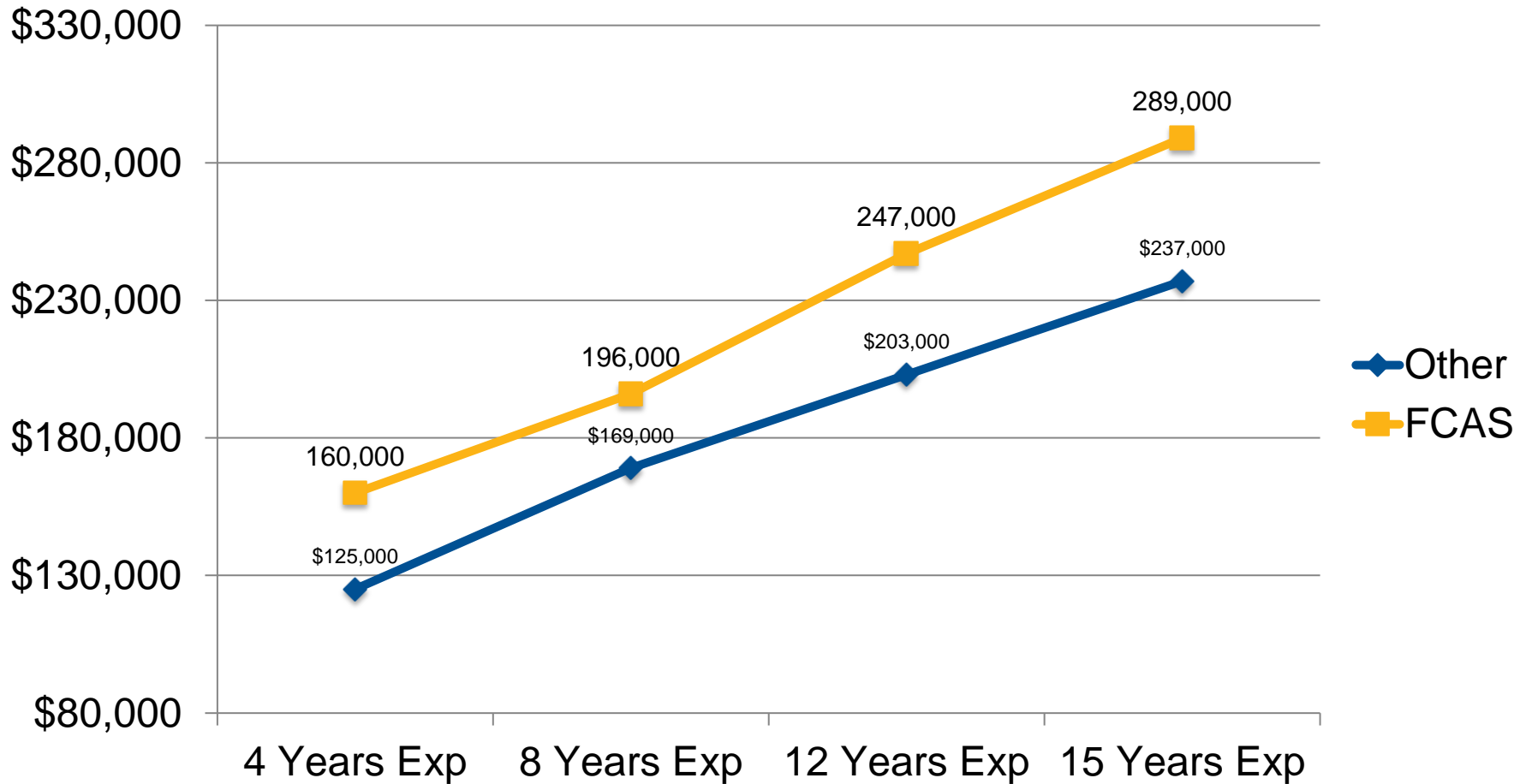
- UnitedHealth, Anthem, Aetna, Kaiser Permanente, Cigna, Humana, Molina, Healthnet, Oscar, CVS, Trupanion, Beam, Delta dental, Blue Cross Blue Shield

International Opportunities

2021 Geographic Distribution - CAS			
United States	7,704	Singapore	46
Canada	1,130	United Kingdom	45
China	144	Switzerland	35
Bermuda	109	Malaysia	28
Hong Kong	57	Other	150

- CAS & SOA Actuary Directory:
 - <https://www.casact.org/membership/find-actuary/>
 - <https://www.actuarialdirectory.org/>
- Company name, location, website, fellows & associates contact information

Salary Comparisons



Used with permission from Ezra Penland Actuarial Recruitment (<http://www.ezrapenland.com/salary/>)



Recruitment Prep w/ChatGPT

ChatGPT – A Powerful Tool for job hunting!

- ChatGPT Introduction
- Refine Your Resume
- Analyzing the Job Description Using AI
- Preparing Interviews with AI
- Misc.



ChatGPT Intro

- If you don't know it or never use it before, you are outdated!
- Tell the AI what you want to do!!
- To maximize the potential of ChatGPT
 - Provide a background of the conversation.
 - A precise and clear **prompt** is essential.
 - Tell the AI that I know you are an AI, so no need to repeat it
 - The more context and details you provide, the better the AI can assist.

GPT-3.5 VS. GPT-4

- 3.5 is good enough for most of our tasks and is unlimited
 - Resume refinement
 - Interview questions drafting
 - Mock Interview
- 4.0 has 50 messages every 3 hrs limit
 - “Advance Data Analysis” function (50 messages every 3 hrs)
 - Plugins
 - ♦ WebPilot
 - ♦ ChatwithPDF
 - ♦ Wikipedia

What is Expected on a Resume?

- Well Organized and Easy to Read Format
- ~~College Classes and GPA Information~~
- Actuarial Exams & VEE Credits
- Internship Experience
- Academic Project or Case Competition Experience
- Proven Technical Skills
- Proven Leadership

John Doe

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EDUCATION

<i>University of ABC, Los Angeles, CA</i>	Exp 05/2023
<ul style="list-style-type: none">• Master of Science, Major in Actuarial Science	GPA: 3.8
<i>University of DEF, Boston, MA</i>	06/2021
<ul style="list-style-type: none">• Master of Science, Major in Actuarial Science (Minor in Statistics)	GPA: 3.8

EMPLOYMENT

Teaching Assistant, <i>University of ABC, Los Angeles, CA</i>	06/2022-Present
<ul style="list-style-type: none">• Facilitated office hour Zoom meetings to respond to students' queries on academic topics, discuss course content, and grade exams.• Assisted the professor in providing remote support for students and bridged the communication <u>gap</u>• Monitored student performance, provided feedback, and offered guidance and <u>support</u>	
Pension Intern, <i>BBB Consulting, Irvine, CA</i>	09/2019-12/2019
<ul style="list-style-type: none">• Calculated participants' defined benefit plans for multiple large clients and created benefit <u>reports</u>• Constructed and maintained Excel/VBA based tools for Average Compensation calculation, as well as QDRO, Required Minimum Distribution, and Cash Balance benefit calculation in a nationwide <u>team</u>• Attended client meetings, took notes, and summarized key discussion <u>points</u>	
Actuarial Intern, <i>CCC Insurance Inc., Woodland Hills, CA</i>	08/2018-10/2018
<ul style="list-style-type: none">• Gathered, processed, and evaluated automobile liability data for multiple corporate <u>clients</u>• Assisted senior actuarial consultants with preparing clients' annual losses evaluation <u>reports</u>• Created Excel/VBA based tool to automate data entry <u>process</u>	

PROJECTS & PUBLICATIONS

Research on Covid-19 Pandemic Worldwide in R and Excel	06/2020-10/2020
<ul style="list-style-type: none">• Collected quantitative data on the pandemic and economy of different countries, and applied various statistical methods to analyze the correlation between economic factors and the death <u>rate</u>• Compiled a comprehensive visualization report to present key insights and <u>conclusions</u>	
Rating of Massachusetts Private Passenger Automobile Insurance in Excel	02/2020-04/2020
<ul style="list-style-type: none">• Retrieved and analyzed rules and rates tables to determine specific factors for each policy and calculate total premiums for multiple <u>coverage</u>• Merged the rating table with rules and rates table to automatically append factors to each policy and calculate total premiums <u>accurately</u>	
Survival Prediction on the Ship Titanic in SAS	09/2019-11/2019
<ul style="list-style-type: none">• Imported and preprocessed original data to construct training, testing, and holdout datasets.• Applied Forward Selection to develop a Logistic Regression Model and assessed the model <u>performance</u>• Evaluated the model with various metrics such as Sensitivity, Specificity, and Accuracy on holdout <u>data</u>	

HONORS & AWARDS

-
- University of ABC 2022/23 Scholarship Recognition Award
 - Final list of the University of ABC 2021/22 Actuarial Case Competition

SKILLS & ACTIVITIES & EXAMS

Computer Skills: Microsoft Office Suite (Advanced in Excel, Word, and Power Point), VBA, R (DataCamp Certified), SQL (DataCamp Certified), and Power BI

Activities: Actuarial Association of University of ABC (member), Southern California Casualty Actuarial Club (student member), and CAS Student Central (student member)

Exams: P, FM, STAM, and All VEE Courses

Resume Refinement w/ChatGPT

- Steps:
 - Inputting your resume details (copy/paste, or provide the PDF via plugins).
 - Tell AI that you will go item by item.
 - Asking and receiving AI-generated suggestions.
 - Customizing and refining the content. (repeat)
- Resume Objective (optional)
- Each Work Experience/Academic Project
 - Provide AI a summary or some context
 - Ask AI for suggestions and refine each item
 - Import the code/file and ask for suggestions
 - Ask AI to provide you a summary of each project/experience

Analyzing the Job Description

- **JD IS IMPORTANT!!**

- Provide the JD link via plugins or simply copy and paste
- Use AI to extract **essential keywords and phrases** from the responsibility and qualification sections, and
- Identify matching skills and qualifications from your own resume.

- For any key terms that you do not understand, you can ask ChatGPT to give you some general info

- E.g. tell me more info about P&C pricing, to the extend that an entry level analyst should know.
- Be careful since AI can talk nonsense...

- Key Words:

- Job Requirement

- Pricing
- Analytical thinker
- Detail Orientation
- Senior management
- **Non-technical colleagues**
- **Multiple assignments**
- Minimal guidance
- Data Science teams
- Insurance rates

- Responsibility

- Forecast loss development
- Pricing proposals
- Senior management
- Implementation and testing
- New pricing factors

- Filing and actuarial justification
- **State regulators**
- Collaborate across departments
- Understand and communicate data findings
- Perform analysis
- Drive and measure performance
- **Machine learning algorithms**
- Statistical techniques
- Business practices
- Manage data architecture
- Data integrity

Interview Process

- Round 1: Phone screen with HR (no need if it is an on campus interview)
- Round 2: Hiring manager interview (or senior actuary interview)
- Round 3: Group interview
 - 1 on 1 interview with multiple rounds or,
 - Panel interview with 2+ interviewers
 - Panel interview, multiple interviewees and multiple interviewers (rare)
- Optional: Case Study (take home interview project)

How to Prepare for Interviews with AI—General Prep

- Common interview questions
 - BQ bank
 - Glassdoor previously asked question/Interview process
- Prepare your answers
 - For each question, draft an initial version of the answer (short essay) and ask AI to review and provide suggestion, then ask AI to refine it accordingly (within 150 words).
 - Emphasize the importance of customizing these responses to reflect your unique experiences and strengths.
 - Incorporate with the JD key words when AI generates the responses.
 - Multiple assignments/deadline
 - Communication skills
 - SQL
 - Resume experience summary

How to Prepare for Interviews with AI—Research

- Company Research—Why this company
 - Wikipedia plugin
 - Gather info
 - Company news, key products, main competitors, actuarial program, etc.
 - Ask AI to provide suggestion on how to answer “why this company?”
- Interviewer Research
 - LinkedIn
 - Actuarial-lookup.com
- **JD IS IMPORTANT!!**

How to Prepare for Interviews with AI—Mock

- Ask AI to be your interviewer:
 - Specify the role of the interviewer, then provide some background info of the interviewer.
 - Hiring manager
 - Peer analyst
 - Senior manager
 - Provide the JD
 - Provide the question bank, also ask AI to include a few questions not on the list

Thank You Letter

- AI can help you to write thank you letter
 - Take some notes during the interview.
 - Do not send the exact same letter to everyone in the company who you met.
 - Send in a timely manner -- 1-2 days is ideal to maximize impression with the interviewers.

Other Tips II

- Exams are important, but no more than 4 if you don't have any experience
- You can try to extend your Internship from 10 weeks to 6 months (part-time)
- Networking is a big part of the working world
- Internal referral can increase the chance
- Once hired, but you have another position you are waiting for results, ask more time but no more than 2 weeks.
- Internship is important, even it is not directly relevant to the position
- Internal transfer is way easier than external applicants
 - Risk management / Underwriting / Commercial Brokerage / Pension admin
 - Other Analyst jobs in insurance companies
 - Catastrophic modeler
 - Actuarial contractor jobs

Questions to Ask

- Questions to Ask

- Can you describe the duties of the job for me?
- Can you describe your company's study program for me?
- What do you like best about your company?
- What skills are especially important for someone in this position?
- What does a typical day look like for this position?
- What projects is the department working on, and can you please describe any upcoming projects?
- Is there a busy season? When is it?
- What is the typical career path for this position?
- How much of the day-to-day work will be individual contributor versus team-based and project work?
- **Some questions related to the topics discussed during the interview, such as some software mentioned, or some projects that you are interested in.**
- When should I expect to hear from you or should I contact you?

Questions to Avoid Asking

- What does this company do?
- Will I have to work overtime?
- What do I have to do to get to your position?
- Why do you think I'd be a good fit for the company?
- If I get the job, how soon can I use my vacation?
- How much will I get paid?

Questions?



Thank you!

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