

Society of Actuaries'
Predictive Analytics and Futurism Section & Technology Section
2019 Predictive Modeling, Innovation and Industry Contest
Official Rules

These are the Official Rules that govern how the Society of Actuaries' (SOA) Predictive Analytics and Futurism Section and Technology Section 2019 Predictive Modeling, Innovation and Industry ("Contest") will operate. In these rules, "you" and "your" refers to an eligible Contest entrant ("Entrant"). By entering, Entrants acknowledge compliance with these Official Rules including all eligibility requirements.

1. CONTEST ENTRY PERIOD

Submission period begins **June 3, 2019** at 12:00:01 AM Central Daylight Time (CDT) and ends **August 31, 2019** at 11:59:59 PM CDT ("Entry Period"). You may enter the Contest by emailing your submission (created in a [Jupyter Notebook](#)) to sections@soa.org with the Submission Details (defined below) prior to the close of the Entry Period.

2. ENTRY GUIDELINES

Entrants need to identify a typical day-to-day problem (e.g. developing lapse rate assumptions under PBR or estimating incurred but not reported reserves for a health plan) faced by an actuary or other individual in the insurance industry ("Problem") and use predictive modeling techniques in practical, novel and teachable ways to solve the Problem; the solution to the Problem must be produced in a Jupyter Notebook (an "Analysis"). Entrants may enter individually or as a Group. Entrants must submit an Analysis in accordance with the following rules:

- The Analysis must be submitted in a Jupyter Notebook.
- Entrants should use a publicly available data set to create a solution to their Problem and illustrate predictive modeling techniques.
- Analyses should not contain any information that identifies the Entrant or Group members.
- Analyses should use narrative text (English only) to clearly communicate the Problem identified by the Entrant/Group, as well as the Analysis results to the judges.
- Within the Analysis submission e-mail, the Entrant or Group must provide the following information (Submission Details):
 - a. If entering individually: Entrant's name, home address, phone number, and email address.
 - b. If entering as a Group: names, email addresses and home addresses for all Group members; one Group member must be identified as the primary point of contact and should provide his/her phone number.
- The Analysis must use one of the following coding languages: R, Python or Julia.

3. JUDGING

The winning Analysis will be determined based on the following weighted criteria:

- Originality (0.3);
- Accessibility (0.3) (i.e. Can the Analysis be replicated? How well communicated is the result?); and
- Value-Added (0.4) (i.e. How relevant and timely was the Problem identified in the Analysis? Does the Analysis provide value in a real-world context? Could a business actually use the Analysis?).

Analyses will be blindly graded by a judging panel of Fellows (FSA) and/or Associates (ASA) of the SOA considered to be qualified by the Predictive Analytics and Futurism and Technology Section Councils of the Society of Actuaries. One judge will be named the Chairperson of the panel. In the event of a tie, the Chairperson's scores will be used to determine the winning Analysis. The judges' decision is final and binding, as will be the Chairperson's in the event of a tie. The judges reserve the right not to award any or all of the prizes if they determine that no Analysis is qualified. The judges reserve the right to modify the judging process.

4. PRIZES

There will be three (3) prize winners in this Contest ("Prize Winners"): one (1) First Place Prize Winner(s); one (1) Second Place Winner(s); and one (1) Third Place Winner(s). The First Place Prize Winner(s) will receive \$500 USD. The Second Place Winner(s) will receive \$300 USD. The Third Place Winner(s) will receive \$200 USD. Prize Winners will also receive professional recognition; information about the Contest and Prize Winners will be published on www.SOA.org following the close of the Contest. The

winning Analyses will be displayed on the SOA's GitHub account. For Groups, the prize will be split equally among the Group members. Each Entrant can only win one prize, and will be awarded the prize with the most value. For the avoidance of doubt, Entrants who win both individually and as part of a Group can only win one prize.

Prize Winner(s) will be determined on or about **September 30, 2019** at approximately 10:00:00 AM CDT at the offices of the SOA located at 475 N. Martingale Rd., Suite 600, Schaumburg, Illinois 60173 USA, and the Prize Winner(s) will be notified no later than **October 18, 2019**. Prize Winners will be announced publicly on or about **October 25, 2019**.

The SOA will mail a check to the Prize Winners at its own expense. The Prize Winners will be required to complete Affidavit of Eligibility/Liability/Publicity Release (where legal). These documents must be signed, notarized and returned within seven (7) days of issuance of notification. Failure to comply will result in disqualification and the Prize will be forfeited. All taxes on the Prizes and other expenses related to accepting and/or using the Prizes not listed in these Official Rules are the sole responsibility of the Prize Winners, who will receive an IRS Form 1099 reflecting the final actual value of the Prize. Prizes are not transferable. No substitution allowed except, at the SOA's sole discretion, a prize of equal or greater value may be substituted.

5. ANALYSIS SUBMISSION RULES

Multiple materially different Analyses (based on materially different Problems) per Entrant and/or Group permitted; Entrant may submit an Analysis individually and as a member of a Group (based on materially different Problems). No purchase necessary to enter or win. Odds of winning depend on the number of Entrants and the quality of the Analyses submitted. By entering the Contest, Entrant is certifying ownership of the Analysis and compliance with the Official Rules. Entries cannot infringe upon any third-party personal or proprietary rights.

6. ELIGIBILITY

Contest open to legal residents of the United States of America, United Kingdom and Canada who are at least eighteen (18) years of age as of **June 3, 2019**. Entrants may enter the Contest individually or as a Group; there is no limit on the number of individuals who can be in a Group. All members of a Group must meet the eligibility criteria. Any individual or Group that does not meet the eligibility criteria will be disqualified. Employees of the Society of Actuaries, its representatives and agents, members of the judging panel, members of the Contest planning committee, and those with whom the foregoing are domiciled, are not eligible to enter the Contest. This Contest is void in Puerto Rico, U.S. overseas military installations and all other U.S. territories and possessions and where prohibited. Contest is subject to all applicable federal, state, provincial and local laws and regulations. Sponsors reserve the right to verify eligibility qualifications of the potential Prize Winner(s). Entries received prior to or after the Entry Period are void.

7. PARTICIPANT OBLIGATIONS

- a. By entering, Entrants consent to the use of their name, an email address, biographical information, photographs and/or likenesses for advertising and publicity purposes without additional compensation (except where prohibited) by Sponsors for purposes concerning this Contest or succeeding contests and for publicity, special events and advertising purposes in connection with promoting the Society of Actuaries, and/or its website. Entrants also consent to being interviewed by the SOA for the purposes of publishing an article(s) on the Contest in SOA publications without additional compensation (except where prohibited).
- b. By entering, each Entrant agrees to defend, indemnify, release and hold harmless the Sponsors from and against any and all losses, demands, damages, rights, claims, injuries, actions and liabilities of any kind arising out of or related to Entrant's participation in the Contest. Any disputes that may arise hereunder shall be governed in all respects by the laws of the State of Illinois without regard to the conflicts of laws principles of any jurisdiction. Venue with respect to any such disputes shall be had in the state and federal courts of the State of Illinois. Sponsor's failure to enforce any term of these rules shall not constitute a waiver of that provision. In any cause of action, the Sponsor's liability will be limited to five hundred dollars (\$500.00 USD), and in no event shall the Sponsors be liable for attorneys' fees and/or experts' fees and costs. By participating in the Contest, each Entrant waives the right to claim any additional damages whatsoever, including, but not limited to, punitive, consequential, incidental or indirect damages.
- c. By entering, Entrants grant the Society of Actuaries a perpetual, royalty-free, non-exclusive, sublicensable, non-transferable license to publish, display, duplicate, use, share, edit, reproduce, and create derivative works of their Analysis, in any and all media, in whole or in part, throughout the world for any purpose, including commercial purposes. You warrant that you are the author of the Analysis and that it is your original work, does

not infringe the intellectual property rights of any other person or entity and no parts of the Analysis have been plagiarized. Entrants agree to indemnify and defend the Society of Actuaries for a breach of the foregoing warranty.

8. PERSONAL INFORMATION

Personal information submitted to enter the Contest will only be used in the event you are one of the Contest Prize Winners, if there is a question or issue regarding your Analysis or its content, if the judges would like to interview you, if your submission is selected as a Best Analysis, and if there is an issue or news to communicate to you pertaining to the Contest. We will not disclose, give, sell, or transfer any personal information about you, unless required for law enforcement or by statute. Notwithstanding the foregoing, Prize Winners' personal information will be used in accordance with Section 7(a).

9. ADDITIONAL TERMS

Neither the Sponsors, their respective officers, directors, and employees (collectively "Releasees") are responsible for incorrect or inaccurate transcription of entry information, or for any human or other error, technical malfunctions, lost/delayed data transmission, omission, interruption, deletion, defect, line failures of any telephone network, computer equipment, software, inability to access any online service or website, or any other error or malfunction, or any injury or damage to Entrant's or any other person's computer related to or resulting from participation in this Contest, or for any injury to person or property. Releasees are not responsible for lost, late, illegible or misdirected entries. If, for any reason, the Contest is not capable of being executed as planned, and/or the Contest is adversely affected by actions/technical failures/events beyond the control of Sponsors that may corrupt, affect the administration, security, fairness, integrity, or proper conduct of the Involvement Program, Sponsors reserve the right in its sole discretion to disqualify any suspect entry and/or to cancel, terminate, modify or suspend the Contest, as Sponsors determine in their sole discretion. Entries not complying with all rules are subject to disqualification.

10. WINNERS LIST

To obtain a copy of these Official Rules or for notification of the Prize Winners, send a self-addressed stamped envelope to: 2019 Predictive Modeling, Innovation and Industry Contest Official Rules/Winner List Request, ATTN: Jessica Schuh, 475 N. Martingale Rd., Suite 600, Schaumburg, Illinois 60173 USA. Requests for winner list must be received no later than three months after the end of the Contest. Vermont residents may omit return postage.

11. SPONSORS

The sponsors of this Contest are the Society of Actuaries' Predictive Analytics and Futurism Section and Technology Section, 475 N. Martingale Road, Suite 600, Schaumburg, Illinois 60173, USA.