Pedestrian Attribute Recognition and Attributed-based Person Retrieval Challenge at WACV 2023 (UPAR@WACV2023)

Contest rules

Official rules

Common terms used in these rules:

These are the official rules that govern how the WACV'2023 Pedestrian Attribute Recognition and Attributed-based Person Retrieval Challenge contest promotion will operate. This promotion will be simply referred to as the contest or the challenge throughout the rest of these rules and may be abbreviated on our website, in our documentation, and other publications as UPAR@WACV2023 Challenge.

In these rules, organizers, we, our, and us refer to CHALEARN and "participant", "you," and "yourself" refers to an eligible contest participant.

1. Contest description

This is a skill-based contest and chance plays no part in the determination of the winner(s).
There are two (2) tracks associated to this contest as described below:
- **Track 1: Pedestrian Attribute Recognition**: <u>Train on predefined </u>data and evaluate generalization properties.
- **Track 2: Attribute-based Person Retrieval**: <u>Train on predefined </u>data and evaluate generalization properties.

Evaluation: We use the harmonic mean from mA and instance-based F1 for Track 1 and the harmonic mean from mA and R-1 for Track 2. At the end of the challenge, participants will be ranked using the public test data and additional data that is kept private. It is important to note that this competition involves submitting results and code. Therefore, participants will be required to share their codes and trained models after the end of the challenge (with detailed instructions) so that the organizers can reproduce the results submitted at the test phase in a code verification stage. Verified code will be applied to a private test dataset for final ranking. At

the end of the challenge, top-ranked methods that pass the code verification stage will be considered valid submissions and compete for any prize that may be offered. The organizers will evaluate the top three submissions on the public leaderboard on the private test set to determine the winner of the challenge.

2. Tentative Contest Schedule

The registered participants will be notified by email of any change in the following tentative schedule (please, check https://chalearnlap.cvc.uab.cat/challenge/52/schedule/ for updated information):
● **Start of the competition (September 15, 2022)**: Release of training (with ground truth) and validation data (without ground truth). Time zone: Codalab will use UTC for all competition tracks/phases.
● **Release of test data (without ground truth) and validation labels. (October 14, 2022)**: At this stage, participants can download the test data and validation labels, both encrypted. With the encryption-decryption strategy, we ensure participants with lower speed Internet connections are at no disadvantage.
● **Test phase begins (October 17, 2022):** Release of test data (and validation labels) decryption keys. Participants start predicting the results on the test data. At this stage they can retrain (or fine-tune) their models**, while still following the challenge rules. Validation labels can only be used for hyper-parameter tuning and NOT for training.**
● **End of the competition (October 31, 2022):** Deadline for submitting the final predictions over the test (evaluation) data.
● **Deadline for code submission (November 1, 2022):** After the end of the test phase, participants are required to share with the organizers the source code used to generate the submitted results and the models. To enforce reproducibility of results, participants are requested to share their source code within a docker container or python virtual environment, with detailed and complete instructions and requirements to run the code. Only solutions that pass the code verification stage are eligible to be announced as top-winning solutions and to compete for the final ranking..
● **Submission of fact sheets (November 1, 2022):** Deadline for submitting the fact sheets using a template provided by the organizers. The fact sheets need to provide detailed and technical information about the developed approach.
● **Release of results (November 11, 2022):** Release of the top-winning solutions after the "code verification" stage.
● **Optionally:** All participants are invited to submit their approach to the associated Real-World Surveillance: Applications and Challenges Workshop (RWS @ WACV2023), independently of their rank position.
    ○ **Paper submission deadline (October 20, 2022)**: Paper submission deadline for submitting their work.
    ○ **Paper submission for challenge participants (November 5th, 2022):** Paper submission deadline for submitting their work.
    ○ **Notification to authors (November 15, 2022):** Notification of acceptance/rejection to

authors of the submitted papers.
  ○ **Camera-ready paper submission deadline (November 17, 2022).**

3. Eligibility

You are eligible to enter this contest if you meet the following requirements:
● You are an individual or a team of people desiring to contribute to the tasks of the challenge and accepting to follow its rules; you are employed by a research laboratory, startup or other legal entity having a scientific research department or activity; and
● You are NOT a resident of any country constrained by US export regulations included in the OFAC sanction page http://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx. Therefore residents of these countries/ regions are not eligible to participate; and
● You are not an employee of CHALEARN or any of the sponsoring or co-organizing entities; and
● You are not involved in any part of the administration and execution of this contest; and
● You are not an immediate family (parent, sibling, spouse, or child) or household member of an employee of CHALEARN or a person involved in any part of the administration and execution of this contest.

This contest is void within the geographic area identified above and wherever else prohibited by law. If you choose to submit an entry, but are not qualified to enter the contest, this entry is voluntary, and any entry you submit is governed by the remainder of these contest rules; CHALEARN reserves the right to evaluate it for scientific purposes. If you are not qualified to submit a contest entry and still choose to submit one, under no circumstances will such entries qualify for sponsored prizes.

4. Entry

To be eligible for judging, an entry must meet the following content/technical requirements:
● Entry contents: During the period of the computational competition, participants are required to submit prediction results. At a later stage, defined in the competition schedule, they are required to share their code with complete instructions to enable reproducibility of the results. To be announced as top-winning solution as well as to be eligible for prizes, the top ranking participants are required to publicly release their code under a license of their choice, taken among popular OSI-approved licenses (http://opensource.org/licenses) and make their code accessible on-line for a period of not less than three years following the end of the challenge (only required for top three ranked participants of the competition). To be part of the final ranking the participants will be asked to fill out a survey (fact sheet) where detailed and technical information about the developed approach is provided, in addition to a description of the subsets of data used for training, validation, and test. The top ranking participants and the rest of participants are also invited (not mandatory) to submit a paper for the proceedings of the associated Real-World Surveillance: Applications and Challenges Workshop (RWS @ WACV2023), following the paper format and schedule provided by the organizers. To be

eligible for prizes, the top ranked participants' scores (i.e., associated to the evaluation metric adopted for each competition track, as defined before) must improve the baseline performance provided by the challenge organizers. Note that the organizers are allowed to update the baseline results at any time during the challenge period.

● Prerequisite: There is no prerequisite to participate, including no requirement to have participated in previous challenges.

● Use of data provided: Images and labels originated from

- the PA100K Dataset under CC-BY 4.0 license "Creative Commons — Attribution 4.0 International — CC BY 4.0",
- PETA Dataset which is intended for research purposes only and as such cannot be used commercially. In addition, reference must be made to their paper publications when this dataset is used in any academic and research reports.
- Market1501-Attributes for which reference must be made to their paper publications.

The supplementary Ground truth labels from UPAR are provided by Fraunhofer IOSB under the creative commons CC-BY-NC-SA-3.0. Participants may use the data beyond the scope of this challenge.

- **Test data**: The organizers will use private test data to perform the final evaluation, hence the participants' final entry will be based both on the public and private test data. Each subset contributes to 50% of the final score. The organizers will evaluate the top three submissions on the public leaderboard on the private test set to determine the winner of the challenge.

- **Training and validation data**: The contest organizers will make available to the participants a training dataset with ground truth labels, and a validation set with no truth labels. Each competition track will have its associated training, validation and test data. The validation data will be used by the participants for practice purposes to validate their systems. It will be similar in composition to the public test set (validation labels may be provided in the final test stage of the challenge). Participants may not use other third-party datasets to train their solutions, in addition to the training set provided. Post-challenge analyses: The organizers will evaluate the top submissions on the public leaderboard on the private test set to determine the 3 top winners of the challenge.

● Submission: The entries of the participants will be submitted online via the Codalab web platform. During the development period, participants will receive immediate feedback on validation data released for practice purposes. During the test period, the participants will receive immediate feedback on the public test data. Note that the performances on the public test data will be verified after the end of the challenge during a code verification stage. Moreover, the maximum number of submissions per participant at the test stage will be set to **3**. The maximum number of submissions per participant at the test stage can be increased by the organizers at any time. Participants are not allowed to create multiple accounts to make additional submissions. The organizers may disqualify suspicious submissions that do not follow this rule. Only submissions that pass the code verification will be considered to be in the final list of winning methods.

● Original work, permissions: In addition, by submitting your entries into this contest you confirm that, to the best of your knowledge:

- Your entry is your own original work; and
- Your entry only includes material that you own, or that you have permission from the

copyright / trademark owner to use.

5. Potential use of entry

Other than what is set forth below, we are not claiming any ownership rights to your entry.
However, by submitting your entry, you:
● Are granting us an irrevocable, worldwide right and license, in exchange for your
opportunity to participate in the contest and potential prize awards, for the duration of the
protection of the copyrights to:
- Use, review, assess, test and otherwise analyze results submitted or produced by your
code and other material submitted by you in connection with this contest and any future
research or contests sponsored by; and
- Feature your entry and all its content in connection with the promotion of this contest in
all media (now known or later developed);
● Agree to sign any necessary documentation that may be required for us and our
designees to make use of the rights you granted above;
● Understand that we cannot control the incoming information you will disclose to our
representatives or our co-sponsors representatives in the course of entering, or what our
representatives will remember about your entry. You also understand that we will not
restrict work assignments of representatives or our co-sponsors representatives who
have had access to your entry. By entering this contest, you agree that use of
information in our representatives or our co-sponsors representatives unaided memories
in the development or deployment of our products or services does not create liability for
us under this agreement or copyright or trade secret law;
● Understand that you will not receive any compensation or credit for use of your entry,
other than what is described in these official rules.
If you do not want to grant us these rights to your entry, please do not enter this contest.

6. Submission of entries

● Follow the instructions on the Codalab website to submit entries.
● The participants will be registered as mutually exclusive teams. Each team may submit
one single final entry. We are not responsible for entries that we do not receive for any
reason, or for entries that we receive but are not functioning properly. In the case a
participant submits multiple entries, the organizers (and Codalab web page) will consider
the last valid one as final (with respect to each phase of the challenge), which will be
used to rank the participant. It is her/his responsibility to monitor the results (or rank
position) on the leaderboard shown on Codalab web page and resubmit the entry that
gives better results, if needed.
● The participants must follow the instructions. We will automatically disqualify incomplete
or invalid entries.

7. Rules for valid submissions

The following rules apply. Participants that do not follow these rules will be disqualified.

- The participants only use the training data specified in the "train_X.csv" files for training their models on the respective splits. Using training data from another split is strictly forbidden. This includes all kinds of training, calibration, etc.
- Models cannot be trained on any additional real or synthetic data except ImageNet. Pre-training with COCO (or any other dataset) is not allowed.
- Any use of the test images is prohibited and will result in disqualification. The test data may not be used in any way, not even unsupervised, semi-supervised, or for domain adaptation.
- Validation data and released labels in the testing phase can only be used to validate the method's performance and not for training.
- For each split, participants may train only one model. This model has to be used to compute predictions for the entire validation/test set. The participants are not allowed to use different approaches/models/hyper-parameter sets/etc. for different subsets of the validation/test data. It is allowed to use different training parameters/hyper-parameters for each of the training splits.
- The maximum number of submissions per participant at the test stage will be set to 3. Participants are not allowed to create multiple accounts to make additional submissions. The organizers may disqualify suspicious submissions that do not follow this rule.
- In order to win the challenge, top-ranked participants' scores must improve the baseline performance provided by the challenge organizers.
- The performances on test data will be verified after the end of the challenge during a code verification stage. Only submissions that pass the code verification will be considered in the final list of winning methods.
- To be part of the final ranking, the participants will be asked to fill out a survey (fact sheet) where detailed and technical information about the developed approach is provided.

8. Judging the entries

The competition winners will be determined based upon the evaluation scores mentioned above on test data (public and private) and code verification. Furthermore, the board of CHALEARN will select a panel of judges to judge the entries; all judges will be forbidden to enter the contest and will be experts in causality, statistics, machine learning, computer vision, or a related field, or experts in challenge organization. A list of the judges will be made available upon request. The judges will review all eligible entries received and select up to three winners for each track (i.e., in case of multiple tracks). The judges will verify that the winners complied with the rules, including that they documented their method by filling out a fact sheet. The decisions of these judges are final and binding. The distribution of prizes according to the decisions made by the judges will be made within three (3) months after completion of the last round of the contest. If we do not receive a sufficient number of entries meeting the entry requirements, we may, at our discretion based on the above criteria, not award any or all of the contest prizes below. In the event of a tie between any eligible entries, the tie will be broken by giving preference to the earliest submission, using the timestamp of the submission platform.

9. Other Sponsored Events

● To stimulate participation, the organizers are making available several channels of scientific paper publication. Publishing papers is optional and will not be a condition to entering the challenge or winning prizes.
● The results of the challenge will be presented at the associated <u>Real-World Surveillance: Applications and Challenges Workshop (RWS @ WACV2023)</u>. A selection of the best workshop papers may be invited to submit extended versions of their papers for a special issue in a top tier journal. Also, the top ranked participants and/or those developing innovative solutions may be invited to write a joint paper with the organizers to be submitted to a top tier conference or journal.
The organizers may also sponsor other events to stimulate participation.

10. Notifications

If there is any change to data, schedule, instructions of participation, or these rules, the registered participants will be notified at the email they provided with the registration.
If you are a potential winner, we will notify you by sending a message to the e-mail address listed on your final entry within seven days following the determination of winners. If the notification that we send is returned as undeliverable, or you are otherwise unreachable for any reason, we may award the prize to an alternate winner, unless forbidden by applicable law. Winners who have entered the contest as a team will be responsible to share any prize among their members. The prize will be delivered to the registered team leader. If this person becomes unavailable for any reason, the prize will be delivered to the authorized account holder of the e-mail address used to make the winning entry.
If you are a potential winner, we may require you to sign a declaration of eligibility, use, indemnity and liability/publicity release and applicable tax forms. If you are a potential winner and are a minor in your place of residence, and we require that your parent or legal guardian will be designated as the winner, we may require that they sign a declaration of eligibility, use, indemnity and liability/publicity release on your behalf. If you, (or your parent/legal guardian if applicable), do not sign and return these required forms within the time period listed on the winner notification message, we may disqualify you (or the designated parent/legal guardian) and select an alternate selected winner.

11. On-line notification

Any changes in the rules or in the data as well as the names of confirmed winners (after contest decisions are made by the judges) will be made available online at https://chalearnlap.cvc.uab.cat/challenge/52/description/ or https://chalearnlap.cvc.uab.cat/. Major changes will be also notified through the e-mail participants registered in the Challenge on Codalab platform.

12. Conditions

By entering this contest you agree:
● To abide by these official rules;

● To the extent allowable under applicable law, to release and hold harmless CHALEARN and sponsors, their respective parents, subsidiaries, affiliates, employees and agents from any and all liability or any injury, loss, damage, right, claim or action of any kind arising from or in connection with this contest or any prize won save for residents of the United Kingdom, Chile, Korea, Greece, Brazil, Turkey, Hong Kong, France and Germany with respect to claims resulting from death or personal injury arising from CHALEARNs, Computer Vision Center at Autonomous University of Barcelona, University of Barcelona's negligence, for residents of the United Kingdom with respect to claims resulting from the tort of deceit or any other liabilities that may not be excluded by law, and for residents of Australia in respect of any implied condition or warranty the exclusion of which from these official rules would contravene any statute or cause any part of these official rules to be void;

● That CHALEARNs decisions will be final and binding on all matters related to this contest; and

● That, by accepting a prize, CHALEARN and competition sponsors may use your team name, your name, and your place of residence online and in print, or in any other media, in connection with this contest, without payment or compensation to you. The declaration of eligibility, use, indemnity and liability/publicity release provided to the potential winner will make reference to obtaining his/her free consent to use his/her name and place of residence. In any case, the lack of such consent does not prevent the winner from receiving the prize.

● This contest will be governed by the laws of the state of California, and you consent to the exclusive jurisdiction and venue of the courts of the state of California for any disputes arising out of this contest. For residents of Austria only: you may withdraw your submission from this contest within seven days of your entry. If you withdraw within seven days of entry, your submission will be returned to you, and we will not make any use of your submission in the future. However, you will not be eligible to win a prize. If you do not withdraw within seven days of entry, you will be bound by the provisions of these official rules. For residents of the United Kingdom only: the provisions of the contracts (rights of third parties) act 1999 will not apply to this agreement. For residents of New Zealand only: the provisions of the contracts (privity) act of 1982 will not apply to this agreement. For Quebec residents: any litigation respecting the conduct or organization of a publicity contest may be submitted to the Régie des Alcools, des Courses et des Jeux for ruling. Any litigation respecting the awarding of a prize may be submitted to the Rgie only for the purpose of helping the parties reach a settlement. For residents of Israel only: this agreement does not entitle third parties to benefits under this agreement as defined in Chapter D of the Contracts Act (General Part) 1973.

● The data are available only for research and educational purposes, within the scope of the challenge. ChaLearn and the organizers make no warranties regarding the database, including but not limited to warranties of non-infringement or fitness for a particular purpose. The copyright of the data remains the property of their respective owners. By downloading and making use of the data, you accept full responsibility for using the data. You shall defend and indemnify ChaLearn and the organizers, including their employees, Trustees, officers and agents, against any and all claims arising from

your use of the data. You agree not to redistribute the data.

13. Unforeseen event

If an unforeseen or unexpected event (including, but not limited to: someone cheating; a virus, Bug, or catastrophic event corrupting data or the submission platform; someone discovering a flaw in the data or modalities of the challenge) that cannot be reasonably anticipated or controlled, (also referred to as force majeure) affects the fairness and / or integrity of this contest, we reserve the right to cancel, change or suspend this contest. This right is reserved whether the event is due to human or technical error. If a solution cannot be found to restore the integrity of the contest, we reserve the right to select winners based on the criteria specified above from among all eligible entries received before we had to cancel, change or suspend the contest subject to obtaining the approval from the Régie des Alcools, des Courses et des Jeux with respect to the province of Quebec.
Computer hacking is unlawful. If you attempt to compromise the integrity or the legitimate operation of this contest by hacking or by cheating or committing fraud in any way, we may seek damages from you to the fullest extent permitted by law. Further, we may ban you from participating in any of our future contests, so please play fairly.

14. Sponsor

ChaLearn is the sponsor of this contest,
955 Creston Road,
Berkeley, CA 94708, USA
events@chalearn.org
and
University of Barcelona, Computer Vision Center at Autonomous University of Barcelona, Human Pose Recovery and Behavior Analysis group, Milestone Systems, Visual Analysis & Perception Lab, Karlsruhe Institute of Technology Vision and Fusion Lab, Fraunhofer IOSB are the co-sponsors of this contest. Additional sponsors can be added during the competition period.

15. Privacy

During the development phase of the contest and when they submit their final entries, contest participants do not need to disclose their real identity, but must provide a valid email address where we can deliver notifications to them regarding the contest. To be eligible for prizes, however, contest participants will need to disclose their real identity to contest organizers, informing them by email of their name, professional affiliation, and address. To enter the contest, the participants will need to become users of the Codalab platform. Any profile information stored on this platform can be viewed and edited by the users. After the contest, the participants may cancel their account with the Codalab and cease to be users of that platform. All personal information will then be destroyed. The Codalab privacy policy will apply to contest information submitted by participants on the Codalab. Otherwise, CHALEARNs privacy policy will apply to this contest and to all information that we receive

from your entry that we receive directly from you or which you have submitted as part of your contest entry on the Codalab. Please read the privacy policy on the contest entry page before accepting the official rules and submitting your entry. Please note that by accepting the official rules you are also accepting the terms of the CHALEARN privacy policy: http://www.chalearn.org/privacy.html. Note that the participants data needed to request dataset access, detailed in the Dataset License document, is considered a different set of personal data from the personal data described above, and as such it follows different rules and lawful basis of data processing. The right of information of such data is described in the Dataset License document.

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