ChaLearn Multi-modal Gesture Recognition Challenge
(http://gesture.chalearn.org/)

Participation summary

Number of teams that participated: 54

Number of teams that submitted their predictions on the test set: 20

Number of teams that submitted fact sheets: 17

Challenge final ranking results

<table>
<thead>
<tr>
<th>TEAM</th>
<th>Test score</th>
<th>Rank position</th>
<th>Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVA MM</td>
<td>0.12756</td>
<td>1</td>
<td>• First place: 500 USD and 1000 USD travel award + 1st prize Award certificate</td>
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<tr>
<td>WWEIGHT</td>
<td>0.15387</td>
<td>2</td>
<td>• Second place: 250 USD and 750 USD travel award + 2nd prize Award certificate</td>
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<tr>
<td>ET</td>
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<td>• Third place: 100 USD and 400 USD travel award + 3rd prize Award certificate</td>
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<tr>
<td>MmM</td>
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<td>PPTK</td>
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<td>LRS</td>
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<td>MMDL</td>
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<td>TELEPOINTS</td>
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<td>CSI MM</td>
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<td>SUMO</td>
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<td>AURINKO</td>
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<td>STEVENWUDI</td>
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<td>JACKSPARROW</td>
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<td>JOEWAN</td>
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<td>MILAN KOVAC</td>
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<td>IAMKHADER</td>
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</table>
**Fact sheets summary**

**Modalities considered**

- Audio+RGB+Skeleton
- Skeleton+RGB
- Audio+RGB+Depth+Skeleton
- Audio+RGB+Depth
- Audio+Skeleton
- Audio+Depth+Skeleton
- Skeleton
- Depth

**Temporal segmentation strategy**

- Combined audio skeleton segmentation
- Skeleton hand position
- Audio speech
- Sliding windows
- Dynamic Programming

**Fusion strategy**

- None
- Late fusion
- Early fusion
Note: several combinations of them are also considered.

Programming language

Used classifiers.

Gaussian Mixture Models
Boosting variants
Extreme Learning Machine
Hidden Markov Model
Dynamic Programming
Neural Network
Random Forest
SVM
Important notes:

For winners: Please, look to the ICMI workshop submission procedure to submit the paper contribution summarizing your approach to the workshop of the challenge. Also look for the submission guidelines to the Journal of Machine Learning Research to submit an extended version of the paper for the submission to the gesture recognition special issue.

For the rest of participants: Given the technical quality of the approaches, we encourage the rest of participants to submit their approaches to the ICMI workshop on the challenge on Gesture Recognition.

Paper submission comments:

The papers will be judged according to the following criteria:
(1) Performance in the challenge, (2) Novelty/Originality, (3) Sanity (correct proofs, good experiments), (4) Insight, and (5) Clarity of presentation.

Papers merely describing the steps taken to produce a challenge entry will not be judged favorably. The choices and advantages of the methods employed should be supported by a literature overview and qualitative and quantitative comparisons with other methods on the data of the challenge and possibly other data. The various building blocks of the methods should be analyzed separately and key novel elements contributing to boosting performance significantly should be singled out. The authors are also encouraged to motivate new approaches in a principled way and draw insights that go beyond the framework of the challenge.

Demo supplemental material will be positively considered for final acceptance of the paper.

We finally would like to thank all the teams for their participation to the challenge.