

## **SemEval-2016 Task 4: Sentiment Analysis in Twitter**

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#	System	2013		Tweet	2014		2015	2016
		Tweet	SMS		Tweet sarcasm	Live- Journal	Tweet	Tweet
1	SwissCheese	0.700 <sub>5</sub>	0.637 <sub>2</sub>	0.716 <sub>5</sub>	0.566 <sub>1</sub>	0.695 <sub>7</sub>	0.671 <sub>1</sub>	<b>0.633<sub>1</sub></b>
2	SENSEI-LIF	0.706 <sub>4</sub>	0.634 <sub>3</sub>	0.744 <sub>2</sub>	0.467 <sub>8</sub>	0.741 <sub>1</sub>	0.662 <sub>2</sub>	<b>0.630<sub>2</sub></b>
3	unimelb	0.687 <sub>7</sub>	0.593 <sub>9</sub>	0.706 <sub>7</sub>	0.449 <sub>11</sub>	0.683 <sub>9</sub>	0.651 <sub>4</sub>	<b>0.617<sub>3</sub></b>
4	INESC-ID	0.723 <sub>2</sub>	0.609 <sub>6</sub>	0.727 <sub>3</sub>	0.554 <sub>3</sub>	0.702 <sub>4</sub>	0.657 <sub>3</sub>	<b>0.610<sub>4</sub></b>
5	aueb.twitter.sentiment	0.666 <sub>8</sub>	0.618 <sub>5</sub>	0.708 <sub>6</sub>	0.410 <sub>17</sub>	0.695 <sub>7</sub>	0.623 <sub>7</sub>	<b>0.605<sub>5</sub></b>
6	SentiSys	0.714 <sub>3</sub>	0.633 <sub>4</sub>	0.723 <sub>4</sub>	0.515 <sub>5</sub>	0.726 <sub>2</sub>	0.644 <sub>5</sub>	<b>0.598<sub>6</sub></b>
7	I2RNTU	0.693 <sub>6</sub>	0.597 <sub>7</sub>	0.680 <sub>8</sub>	0.469 <sub>6</sub>	0.696 <sub>6</sub>	0.638 <sub>6</sub>	<b>0.596<sub>7</sub></b>
8	INSIGHT-1	0.602 <sub>16</sub>	0.582 <sub>12</sub>	0.644 <sub>16</sub>	0.391 <sub>23</sub>	0.559 <sub>23</sub>	0.595 <sub>16</sub>	<b>0.593<sub>8</sub></b>
9	twise	0.610 <sub>15</sub>	0.540 <sub>17</sub>	0.645 <sub>14</sub>	0.450 <sub>10</sub>	0.649 <sub>13</sub>	0.621 <sub>8</sub>	<b>0.586<sub>9</sub></b>
10	ECNU	0.643 <sub>10</sub>	0.593 <sub>9</sub>	0.662 <sub>9</sub>	0.425 <sub>14</sub>	0.663 <sub>10</sub>	0.606 <sub>11</sub>	<b>0.585<sub>10</sub></b>
11	NTNUSentEval	0.623 <sub>12</sub>	0.641 <sub>1</sub>	0.651 <sub>11</sub>	0.427 <sub>13</sub>	0.719 <sub>3</sub>	0.599 <sub>13</sub>	<b>0.583<sub>11</sub></b>
12	MDSent	0.589 <sub>19</sub>	0.509 <sub>21</sub>	0.587 <sub>20</sub>	0.386 <sub>24</sub>	0.606 <sub>19</sub>	0.593 <sub>18</sub>	<b>0.580<sub>12</sub></b>
14	CUFÉ	0.642 <sub>11</sub>	0.596 <sub>8</sub>	0.662 <sub>9</sub>	0.466 <sub>9</sub>	0.697 <sub>5</sub>	0.598 <sub>14</sub>	<b>0.580<sub>12</sub></b>
	THUIR	0.616 <sub>13</sub>	0.575 <sub>14</sub>	0.648 <sub>12</sub>	0.399 <sub>20</sub>	0.640 <sub>15</sub>	0.617 <sub>10</sub>	<b>0.576<sub>14</sub></b>
16	PUT	0.565 <sub>21</sub>	0.511 <sub>20</sub>	0.614 <sub>19</sub>	0.360 <sub>27</sub>	0.648 <sub>14</sub>	0.597 <sub>15</sub>	<b>0.576<sub>14</sub></b>
	LYS	0.650 <sub>9</sub>	0.579 <sub>13</sub>	0.647 <sub>13</sub>	0.407 <sub>18</sub>	0.655 <sub>11</sub>	0.603 <sub>12</sub>	<b>0.575<sub>16</sub></b>
17	IIP	0.598 <sub>17</sub>	0.465 <sub>23</sub>	0.645 <sub>14</sub>	0.405 <sub>19</sub>	0.640 <sub>15</sub>	0.619 <sub>9</sub>	<b>0.574<sub>17</sub></b>
18	UniPI	0.592 <sub>18</sub>	0.585 <sub>11</sub>	0.627 <sub>18</sub>	0.381 <sub>25</sub>	0.654 <sub>12</sub>	0.586 <sub>19</sub>	<b>0.571<sub>18</sub></b>
20	DIEGOLab16	0.813 <sub>1</sub>	0.543 <sub>16</sub>	0.759 <sub>1</sub>	0.562 <sub>2</sub>	0.615 <sub>18</sub>	0.595 <sub>16</sub>	<b>0.571<sub>18</sub></b>
	GTI	0.612 <sub>14</sub>	0.524 <sub>18</sub>	0.639 <sub>17</sub>	0.468 <sub>7</sub>	0.623 <sub>17</sub>	0.584 <sub>20</sub>	<b>0.539<sub>20</sub></b>
21	OPAL	0.567 <sub>20</sub>	0.562 <sub>15</sub>	0.556 <sub>23</sub>	0.395 <sub>21</sub>	0.593 <sub>21</sub>	0.531 <sub>21</sub>	<b>0.505<sub>21</sub></b>
22	DSIC-ELIRF	0.494 <sub>25</sub>	0.404 <sub>26</sub>	0.546 <sub>26</sub>	0.342 <sub>29</sub>	0.517 <sub>24</sub>	0.531 <sub>21</sub>	<b>0.502<sub>22</sub></b>
23	UofL	0.490 <sub>26</sub>	0.443 <sub>24</sub>	0.547 <sub>25</sub>	0.372 <sub>26</sub>	0.574 <sub>22</sub>	0.502 <sub>25</sub>	<b>0.499<sub>23</sub></b>
25	ELIRF	0.462 <sub>28</sub>	0.408 <sub>25</sub>	0.514 <sub>28</sub>	0.310 <sub>33</sub>	0.493 <sub>25</sub>	0.493 <sub>26</sub>	<b>0.499<sub>23</sub></b>
	ISTI-CNR	0.538 <sub>22</sub>	0.492 <sub>22</sub>	0.572 <sub>21</sub>	0.327 <sub>30</sub>	0.598 <sub>20</sub>	0.508 <sub>24</sub>	<b>0.494<sub>25</sub></b>
26	SteM	0.518 <sub>23</sub>	0.315 <sub>29</sub>	0.571 <sub>22</sub>	0.320 <sub>32</sub>	0.405 <sub>28</sub>	0.517 <sub>23</sub>	<b>0.478<sub>26</sub></b>
27	Tweester	0.506 <sub>24</sub>	0.340 <sub>28</sub>	0.529 <sub>27</sub>	0.540 <sub>4</sub>	0.379 <sub>29</sub>	0.479 <sub>28</sub>	<b>0.455<sub>27</sub></b>
28	Minions	0.489 <sub>27</sub>	0.521 <sub>19</sub>	0.554 <sub>24</sub>	0.420 <sub>16</sub>	0.475 <sub>26</sub>	0.481 <sub>27</sub>	<b>0.415<sub>28</sub></b>
29	aicyber	0.418 <sub>29</sub>	0.361 <sub>27</sub>	0.457 <sub>29</sub>	0.326 <sub>31</sub>	0.440 <sub>27</sub>	0.432 <sub>29</sub>	<b>0.402<sub>29</sub></b>
30	mib	0.394 <sub>30</sub>	0.310 <sub>30</sub>	0.415 <sub>31</sub>	0.352 <sub>28</sub>	0.359 <sub>31</sub>	0.413 <sub>31</sub>	<b>0.401<sub>30</sub></b>
31	VCU-TSA	0.383 <sub>31</sub>	0.307 <sub>31</sub>	0.444 <sub>30</sub>	0.425 <sub>14</sub>	0.336 <sub>32</sub>	0.416 <sub>30</sub>	<b>0.372<sub>31</sub></b>
32	SentimentalITists	0.339 <sub>33</sub>	0.238 <sub>33</sub>	0.393 <sub>32</sub>	0.288 <sub>34</sub>	0.323 <sub>34</sub>	0.343 <sub>33</sub>	<b>0.339<sub>32</sub></b>
33	Wisers_Research	0.355 <sub>32</sub>	0.284 <sub>32</sub>	0.393 <sub>32</sub>	0.430 <sub>12</sub>	0.366 <sub>30</sub>	0.377 <sub>32</sub>	<b>0.330<sub>33</sub></b>
34	CICBUAPnlp	0.193 <sub>34</sub>	0.193 <sub>34</sub>	0.335 <sub>34</sub>	0.393 <sub>22</sub>	0.326 <sub>33</sub>	0.303 <sub>34</sub>	<b>0.303<sub>34</sub></b>
	baseline (positive)	0.292	0.190	0.346	0.277	0.272	0.303	<b>0.255</b>

Table 1: Historical results for Subtask A “Message Polarity Classification”. The systems are ordered by their score on the Twitter2016 test dataset; the rankings on the individual datasets are indicated with a subscript.

#	System	Tweet 2016		
		AvgF1	AvgR	Acc
1	SwissCheese	<b>0.633</b> <sub>1</sub>	0.667 <sub>2</sub>	0.646 <sub>1</sub>
2	SENSEI-LIF	<b>0.630</b> <sub>2</sub>	0.670 <sub>1</sub>	0.617 <sub>7</sub>
3	unimelb	<b>0.617</b> <sub>3</sub>	0.641 <sub>5</sub>	0.616 <sub>8</sub>
4	INESC-ID	<b>0.610</b> <sub>4</sub>	0.662 <sub>3</sub>	0.600 <sub>10</sub>
5	aueb.twitter.sentiment	<b>0.605</b> <sub>5</sub>	0.644 <sub>4</sub>	0.629 <sub>6</sub>
6	SentiSys	<b>0.598</b> <sub>6</sub>	0.641 <sub>5</sub>	0.609 <sub>9</sub>
7	I2RNTU	<b>0.596</b> <sub>7</sub>	0.637 <sub>7</sub>	0.593 <sub>12</sub>
8	INSIGHT-1	<b>0.593</b> <sub>8</sub>	0.616 <sub>12</sub>	0.635 <sub>5</sub>
9	twise	<b>0.586</b> <sub>9</sub>	0.598 <sub>17</sub>	0.528 <sub>24</sub>
10	ECNU	<b>0.585</b> <sub>10</sub>	0.617 <sub>11</sub>	0.571 <sub>17</sub>
11	NTNUSentEval	<b>0.583</b> <sub>11</sub>	0.619 <sub>9</sub>	0.643 <sub>2</sub>
12	MDSent	<b>0.580</b> <sub>12</sub>	0.592 <sub>18</sub>	0.545 <sub>20</sub>
14	CUFE	<b>0.580</b> <sub>12</sub>	0.619 <sub>9</sub>	0.637 <sub>4</sub>
	THUIR	<b>0.576</b> <sub>14</sub>	0.605 <sub>16</sub>	0.596 <sub>11</sub>
16	PUT	<b>0.576</b> <sub>14</sub>	0.607 <sub>14</sub>	0.584 <sub>14</sub>
	LYS	<b>0.575</b> <sub>16</sub>	0.615 <sub>13</sub>	0.585 <sub>13</sub>
17	IIP	<b>0.574</b> <sub>17</sub>	0.579 <sub>19</sub>	0.537 <sub>23</sub>
18	UniPI	<b>0.571</b> <sub>18</sub>	0.607 <sub>14</sub>	0.639 <sub>3</sub>
20	DIEGOLab16	<b>0.571</b> <sub>18</sub>	0.624 <sub>8</sub>	0.582 <sub>15</sub>
	GTI	<b>0.539</b> <sub>20</sub>	0.557 <sub>21</sub>	0.518 <sub>26</sub>
21	OPAL	<b>0.505</b> <sub>21</sub>	0.560 <sub>20</sub>	0.541 <sub>22</sub>
22	DSIC-ELIRF	<b>0.502</b> <sub>22</sub>	0.511 <sub>25</sub>	0.513 <sub>27</sub>
23	UofL	<b>0.499</b> <sub>23</sub>	0.537 <sub>22</sub>	0.572 <sub>16</sub>
25	ELiRF	<b>0.499</b> <sub>23</sub>	0.516 <sub>24</sub>	0.543 <sub>21</sub>
	ISTI-CNR	<b>0.494</b> <sub>25</sub>	0.529 <sub>23</sub>	0.567 <sub>18</sub>
26	SteM	<b>0.478</b> <sub>26</sub>	0.496 <sub>27</sub>	0.452 <sub>31</sub>
27	Tweester	<b>0.455</b> <sub>27</sub>	0.503 <sub>26</sub>	0.523 <sub>25</sub>
28	Minions	<b>0.415</b> <sub>28</sub>	0.485 <sub>28</sub>	0.556 <sub>19</sub>
29	aicyber	<b>0.402</b> <sub>29</sub>	0.457 <sub>29</sub>	0.506 <sub>28</sub>
30	mib	<b>0.401</b> <sub>30</sub>	0.438 <sub>30</sub>	0.480 <sub>29</sub>
31	VCU-TSA	<b>0.372</b> <sub>31</sub>	0.390 <sub>32</sub>	0.382 <sub>32</sub>
32	SentimentalTists	<b>0.339</b> <sub>32</sub>	0.424 <sub>31</sub>	0.480 <sub>29</sub>
33	Wisers_Research	<b>0.330</b> <sub>33</sub>	0.333 <sub>34</sub>	0.298 <sub>34</sub>
34	CICBUAPnlp	<b>0.303</b> <sub>34</sub>	0.377 <sub>33</sub>	0.374 <sub>33</sub>
	baseline (positive)	<b>0.255</b>	0.333	0.342

Table 2: Results for Subtask A “Message Polarity Classification” (on test-2016 only). The systems are ordered by their score on the Twitter2016 test dataset; the rankings on the individual datasets are indicated with a subscript.

#	System	AvgR	AvgF1	Acc
1	Tweester	<b>0.797</b> <sub>1</sub>	0.799 <sub>1</sub>	0.862 <sub>3</sub>
2	LYS	<b>0.791</b> <sub>2</sub>	0.720 <sub>10</sub>	0.762 <sub>17</sub>
3	thecerealkiller	<b>0.784</b> <sub>3</sub>	0.762 <sub>5</sub>	0.823 <sub>9</sub>
4	ECNU	<b>0.768</b> <sub>4</sub>	0.770 <sub>4</sub>	0.843 <sub>5</sub>
5	INSIGHT-1	<b>0.767</b> <sub>5</sub>	0.786 <sub>3</sub>	0.864 <sub>2</sub>
6	PUT	<b>0.763</b> <sub>6</sub>	0.732 <sub>8</sub>	0.794 <sub>14</sub>
7	unimelb	<b>0.758</b> <sub>7</sub>	0.788 <sub>2</sub>	0.870 <sub>1</sub>
8	twise	<b>0.756</b> <sub>8</sub>	0.752 <sub>6</sub>	0.826 <sub>8</sub>
9	GTI	<b>0.736</b> <sub>9</sub>	0.731 <sub>9</sub>	0.811 <sub>11</sub>
10	finki	<b>0.720</b> <sub>10</sub>	0.748 <sub>7</sub>	0.848 <sub>4</sub>
11	pkudblab	<b>0.689</b> <sub>11</sub>	0.716 <sub>11</sub>	0.832 <sub>7</sub>
12	CUFE	<b>0.679</b> <sub>12</sub>	0.708 <sub>12</sub>	0.834 <sub>6</sub>
13	ISTI-CNR	<b>0.671</b> <sub>13</sub>	0.690 <sub>13</sub>	0.811 <sub>11</sub>
14	SwissCheese	<b>0.648</b> <sub>14</sub>	0.674 <sub>14</sub>	0.820 <sub>10</sub>
15	SentimentalITists	<b>0.624</b> <sub>15</sub>	0.643 <sub>15</sub>	0.802 <sub>13</sub>
16	PotTS	<b>0.618</b> <sub>16</sub>	0.610 <sub>17</sub>	0.712 <sub>18</sub>
17	OPAL	<b>0.616</b> <sub>17</sub>	0.633 <sub>16</sub>	0.792 <sub>15</sub>
18	Wisers_Research	<b>0.522</b> <sub>18</sub>	0.502 <sub>18</sub>	0.577 <sub>19</sub>
19	VCU-TSA	<b>0.502</b> <sub>19</sub>	0.448 <sub>19</sub>	0.775 <sub>16</sub>
	baseline (positive)	<b>0.500</b>	0.438	0.778

Table 3: Results for Subtask B “Tweet classification according to a two-point scale”. The systems are ordered by their  $\rho^{PN}$  score (higher is better).

#	System	$MAE^M$	$MAE^\mu$
1	twise	<b>0.719</b> <sub>1</sub>	0.632 <sub>5</sub>
2	ECNU	<b>0.806</b> <sub>2</sub>	0.726 <sub>8</sub>
3	PUT	<b>0.860</b> <sub>3</sub>	0.773 <sub>9</sub>
4	LYS	<b>0.864</b> <sub>4</sub>	0.694 <sub>7</sub>
5	finki	<b>0.869</b> <sub>5</sub>	0.672 <sub>6</sub>
6	INSIGHT-1	<b>1.006</b> <sub>6</sub>	0.607 <sub>3</sub>
7	ISTI-CNR	<b>1.074</b> <sub>7</sub>	0.580 <sub>1</sub>
8	YZU-NLP	<b>1.111</b> <sub>8</sub>	0.588 <sub>2</sub>
9	SentimentalITists	<b>1.148</b> <sub>9</sub>	0.625 <sub>4</sub>
10	PotTS	<b>1.237</b> <sub>10</sub>	0.860 <sub>10</sub>
11	pkudblab	<b>1.697</b> <sub>11</sub>	1.300 <sub>11</sub>
	baseline (0)	<b>1.200</b>	0.537

Table 4: Results for Subtask C “Tweet classification according to a five-point scale”. The systems are ordered by their  $MAE^M$  score (lower is better).

#	System	KLD	AE	RAE
1	finki	<b>0.034</b> <sub>1</sub>	0.074 <sub>1</sub>	0.707 <sub>3</sub>
2	LYS	<b>0.053</b> <sub>2</sub>	0.099 <sub>4</sub>	0.844 <sub>5</sub>
	twise	<b>0.053</b> <sub>2</sub>	0.101 <sub>5</sub>	0.864 <sub>6</sub>
4	INSIGHT-1	<b>0.054</b> <sub>4</sub>	0.085 <sub>2</sub>	0.423 <sub>1</sub>
5	GTI	<b>0.055</b> <sub>5</sub>	0.104 <sub>6</sub>	1.200 <sub>10</sub>
	QCRI	<b>0.055</b> <sub>5</sub>	0.095 <sub>3</sub>	0.864 <sub>6</sub>
7	NRU-HSE	<b>0.084</b> <sub>7</sub>	0.120 <sub>8</sub>	0.767 <sub>4</sub>
8	PotTS	<b>0.094</b> <sub>8</sub>	0.150 <sub>12</sub>	1.838 <sub>12</sub>
9	pkudblab	<b>0.099</b> <sub>9</sub>	0.109 <sub>7</sub>	0.947 <sub>8</sub>
10	ECNU	<b>0.121</b> <sub>10</sub>	0.148 <sub>11</sub>	1.171 <sub>9</sub>
11	ISTI-CNR	<b>0.127</b> <sub>11</sub>	0.147 <sub>9</sub>	1.371 <sub>11</sub>
12	SwissCheese	<b>0.191</b> <sub>12</sub>	0.147 <sub>9</sub>	0.638 <sub>2</sub>
13	UDLAP	<b>0.261</b> <sub>13</sub>	0.274 <sub>13</sub>	2.973 <sub>13</sub>
14	HSENN	<b>0.399</b> <sub>14</sub>	0.336 <sub>14</sub>	3.930 <sub>14</sub>
	baseline (1 0)	<b>0.887</b>	0.242	1.155
	baseline (avg on train+dev+devtest)	<b>0.175</b>	0.184	2.110

Table 5: Results for Subtask D “Tweet quantification according to a two-point scale”. The systems are ordered by their *KLD* score (lower is better).

#	System	Score
1	QCRI	0.243
2	finki	0.316
3	pkudblab	0.331
4	NRU-HSE	0.334
5	ECNU	0.341
6	ISTI-CNR	0.358
7	LYS	0.360
8	INSIGHT-1	0.366
9	HSENN	0.545
10	PotTS	0.818
	baseline (0 0 0 1 0)	0.734
	baseline (avg on train+dev+devtest)	0.474

Table 6: Results for Subtask E “Tweet quantification according to a five-point scale”. The systems are ordered by their *EMD* score (lower is better).

Subtasks	Team ID	Affiliation	Nation	Paper
A	aicyber	aicyber.com	China	
A	aueb.twitter.sentiment	Department of Informatics, Athens University of Economics and Business	Greece	
A	CICBUAPnlp	Instituto Politecnico Nacional Benemrita Universidad Autonoma de Puebla	Mexico	
A B	CUFE	Cairo University	Egypt	
A	DIEGOLab16	Arizona State University	USA	
A	DSIC-ELIRF	Universitat Politcnica de Valncia	Spain	
A B C D E	ECNU	East China Normal University	China	
A	ELiRF	Universitat Politcnica de Valncia	Spain	
B C D E	finki	Saints Cyril and Methodius University, Skopje	Macedonia	
A B D	GTI	AtlantTIC Centre, University of Vigo	Spain	
D E	HSENN	National Research University Higher School of Economics	Russia	
A	I2RNTU	Institute for Infocomm Research, A*STAR School of Computer Engineering, Nanyang Technological University	Singapore	
A	IIP	Infosys Limited	India	
A	INESC-ID	INESC-ID, Lisboa Instituto Superior Tcnico, Universidade de Lisboa	Portugal	
A B C D E	INSIGHT-1	INSIGHT Research Centre, National University of Ireland, Galway AYLIEN Inc.	Ireland	
A B C D E	LYS	Universidade da Corua Universidade de Vigo	Spain	
A	MDSSENT	University of Maryland Baltimore County	USA	
A	mib	Istituto di Informatica e Telematica, Consiglio Nazionale delle Ricerche	Italy	
A	Minions	University of Iasi	Romania	
A B C D E	ISTI-CNR	Istituto di Scienza e Tecnologie dell'Informazione, Consiglio Nazionale delle Ricerche	Italy	
D E	NRU-HSE	National Research University Higher School of Economics	Russia	
A	NTNUSentEval	Norwegian University of Science and Technology	Norway	
A B	OPAL	European Commission Joint Research Centre	Italy	
B C D E	pkudblab	Peking University	China	
B C D E	PotTS	University of Potsdam Retresco GmbH	Germany	
A B C	PUT	Poznan University of Technology	Poland	
D E	QCRI (**)	Qatar Computing Research Institute	Qatar	(?)
A	SENSEI-LIF	Aix-Marseille University - CNRS - LIF	France	
A B C	SentimentalITists	University of Iasi	Romania	
A	SentiSys	Aix-Marseille University	France	
A	SteM	Sabanci University Marmara University Otto-von-Guericke University Magdeburg	Turkey Turkey Germany	
A B D	SwissCheese	ETH Zrich	Switzerland	
B	thecerealkiller	Amazon.com	USA	
A	THUIR	Tsinghua University	China	
A B	Tweester	School of ECE, Technical University of Crete Department of Informatics, University of Athens Signal Analysis and Interpretation Laboratory (SAIL) Institute for Language & Speech Processing - ILSP	Greece	
A B C D	twise	University of Grenoble-Alpes	France	
D	UDLAP	Universidad de las Amricas Puebla (UDLAP)	Mexico	
A B	unimelb	University of Melbourne	Australia	
A	UniPI	Universit di Pisa	Italy	
A	UofL	University of Louisville	USA	
A B	VCU-TSA	Virginia Commonwealth University	USA	
A B	Wisers_Research	Wisers Information Limited	Hong Kong SAR, China	
C	YZU-NLP	Yuan Ze University, Taoyuan Yunnan University, Kunming	Taiwan China	
34 19 11 14 10	Total			

Table 7: Participating teams (Column 2), their affiliation (Column 3) and nationality (Column 4), the sub-tasks they have participated in (Column 1), and the paper they have contributed (Column 5). Teams marked with a (\*\*) include some of the SemEval 2016 Task 4 organizers.