

Hyp.	System	Gender		Age		Hate Speech		Bots		Fake News		Depression	
		Acc.	$F_1$	Acc.	$F_1$	Acc.	$F_1$	Acc.	$F_1$	Acc.	$F_1$	Acc.	$F_1$
$H_1$	CA	65.1 <sub>1.1</sub>	61.4 <sub>1.5</sub>	43.9 <sub>3.5</sub>	24.8 <sub>4.5</sub>	66.0 <sub>5.2</sub>	65.8 <sub>5.3</sub>	54.4 <sub>0.6</sub>	42.4 <sub>1.2</sub>	<b>64.3<sub>3.8</sub></b>	<b>63.8<sub>3.7</sub></b>	14.6 <sub>4.7</sub>	6.3 <sub>1.7</sub>
	SN	32.5 <sub>1.8</sub>	31.5 <sub>1.5</sub>	22.9 <sub>2.1</sub>	22.2 <sub>3.6</sub>	45.0 <sub>4.0</sub>	36.4 <sub>7.1</sub>	37.0 <sub>1.6</sub>	28.1 <sub>0.9</sub>	34.3 <sub>4.8</sub>	33.5 <sub>4.4</sub>	26.6 <sub>6.8</sub>	15.9 <sub>4.6</sub>
$H_2$	CA	72.2 <sub>0.9</sub>	71.1 <sub>1.0</sub>	43.9 <sub>3.5</sub>	24.8 <sub>4.5</sub>	64.0 <sub>10.7</sub>	62.9 <sub>11.4</sub>	50.0 <sub>0.1</sub>	33.4 <sub>0.1</sub>	51.0 <sub>1.5</sub>	35.5 <sub>3.1</sub>	14.6 <sub>4.7</sub>	6.3 <sub>1.7</sub>
	SN	32.6 <sub>2.3</sub>	31.1 <sub>2.2</sub>	43.2 <sub>4.4</sub>	33.2 <sub>5.6</sub>	47.0 <sub>12.0</sub>	46.3 <sub>12.4</sub>	48.6 <sub>0.2</sub>	32.7 <sub>0.1</sub>	35.3 <sub>3.6</sub>	35.0 <sub>3.4</sub>	30.4 <sub>1.9</sub>	11.9 <sub>0.6</sub>
$H_3$	CA	61.2 <sub>0.9</sub>	55.2 <sub>1.4</sub>	14.5 <sub>1.5</sub>	7.5 <sub>1.9</sub>	<b>71.2<sub>2.8</sub></b>	<b>71.0<sub>2.8</sub></b>	50.0 <sub>0.1</sub>	33.4 <sub>0.1</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	<b>27.4<sub>5.5</sub></b>	<b>22.3<sub>3.9</sub></b>
	SN	33.3 <sub>1.8</sub>	32.0 <sub>1.5</sub>	9.1 <sub>3.2</sub>	5.1 <sub>3.0</sub>	47.5 <sub>4.3</sub>	32.9 <sub>3.1</sub>	48.4 <sub>0.3</sub>	43.6 <sub>0.4</sub>	34.7 <sub>8.2</sub>	34.1 <sub>8.5</sub>	17.9 <sub>7.4</sub>	15.5 <sub>6.1</sub>
$H_4$	CA	70.9 <sub>1.4</sub>	69.3 <sub>1.6</sub>	14.4 <sub>1.3</sub>	6.3 <sub>0.5</sub>	59.5 <sub>4.8</sub>	55.8 <sub>5.4</sub>	50.4 <sub>0.2</sub>	34.1 <sub>0.4</sub>	46.0 <sub>3.2</sub>	36.0 <sub>3.2</sub>	13.4 <sub>6.1</sub>	5.9 <sub>2.3</sub>
	SN	32.3 <sub>2.1</sub>	30.8 <sub>2.0</sub>	<b>51.5<sub>7.5</sub></b>	<b>37.4<sub>6.6</sub></b>	40.5 <sub>6.0</sub>	34.4 <sub>6.1</sub>	48.4 <sub>0.4</sub>	32.9 <sub>0.3</sub>	48.3 <sub>2.0</sub>	42.3 <sub>3.9</sub>	28.4 <sub>6.0</sub>	21.9 <sub>5.2</sub>
$H_5$	CA	<b>74.9<sub>1.5</sub></b>	<b>74.7<sub>1.5</sub></b>	24.3 <sub>2.5</sub>	17.3 <sub>1.4</sub>	66.0 <sub>7.4</sub>	65.8 <sub>7.6</sub>	51.0 <sub>0.3</sub>	35.6 <sub>0.7</sub>	53.0 <sub>2.7</sub>	43.0 <sub>3.3</sub>	-	-
	SN	35.9 <sub>1.5</sub>	32.2 <sub>1.3</sub>	46.5 <sub>7.3</sub>	31.8 <sub>3.6</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	38.8 <sub>0.9</sub>	28.3 <sub>0.5</sub>	49.7 <sub>2.7</sub>	35.4 <sub>3.4</sub>	-	-
$H_6$	CA	49.6 <sub>0.1</sub>	33.5 <sub>0.2</sub>	45.2 <sub>3.7</sub>	27.6 <sub>2.6</sub>	64.5 <sub>4.5</sub>	62.3 <sub>5.4</sub>	50.7 <sub>0.2</sub>	34.9 <sub>0.5</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	-	-
	SN	32.5 <sub>1.1</sub>	30.5 <sub>0.9</sub>	31.8 <sub>7.6</sub>	27.8 <sub>8.6</sub>	47.0 <sub>3.3</sub>	34.9 <sub>4.4</sub>	49.2 <sub>0.3</sub>	33.0 <sub>0.1</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	-	-
$H_7$	CA	69.8 <sub>1.6</sub>	69.6 <sub>1.6</sub>	-	-	64.0 <sub>6.0</sub>	62.5 <sub>7.2</sub>	51.0 <sub>0.4</sub>	35.5 <sub>0.8</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	-	-
	SN	38.4 <sub>3.6</sub>	38.1 <sub>3.5</sub>	-	-	44.5 <sub>4.5</sub>	34.7 <sub>4.4</sub>	<b>62.2<sub>1.4</sub></b>	<b>62.2<sub>1.4</sub></b>	43.7 <sub>2.2</sub>	36.3 <sub>1.0</sub>	-	-
$H_8$	CA	70.8 <sub>1.6</sub>	69.6 <sub>1.9</sub>	-	-	51.5 <sub>1.4</sub>	36.5 <sub>2.9</sub>	-	-	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	-	-
	SN	42.7 <sub>1.1</sub>	34.9 <sub>1.3</sub>	-	-	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	-	-	55.7 <sub>2.5</sub>	51.8 <sub>2.4</sub>	-	-

Table 1: **English Validation results** of the hypotheses, CA and SN models. Top results are highlighted with **bold**

Hyp.	System	Gender		Age		Hate Speech		Bots		Fake News	
		Acc.	$F_1$	Acc.	$F_1$	Acc.	$F_1$	Acc.	$F_1$	Acc.	$F_1$
$H_1$	CA	66.8 <sub>1.0</sub>	66.2 <sub>1.0</sub>	22.5 <sub>10.3</sub>	13.6 <sub>6.2</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	50.4 <sub>0.2</sub>	34.1 <sub>0.5</sub>	50.7 <sub>1.9</sub>	36.3 <sub>3.5</sub>
	SN	35.9 <sub>1.6</sub>	32.7 <sub>1.3</sub>	34.0 <sub>9.5</sub>	19.4 <sub>5.2</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	42.7 <sub>0.5</sub>	30.7 <sub>0.4</sub>	50.7 <sub>4.7</sub>	41.8 <sub>6.4</sub>
$H_2$	CA	65.7 <sub>0.7</sub>	63.4 <sub>0.7</sub>	20.0 <sub>2.3</sub>	8.3 <sub>0.8</sub>	50.5 <sub>1.1</sub>	34.4 <sub>2.4</sub>	50.7 <sub>0.3</sub>	34.8 <sub>0.6</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>
	SN	37.3 <sub>1.2</sub>	33.6 <sub>1.3</sub>	28.8 <sub>5.1</sub>	20.4 <sub>1.7</sub>	49.0 <sub>1.4</sub>	32.9 <sub>0.6</sub>	<b>51.2<sub>1.7</sub></b>	<b>50.1<sub>1.6</sub></b>	50.0 <sub>3.5</sub>	37.9 <sub>4.8</sub>
$H_3$	CA	68.1 <sub>1.1</sub>	67.0 <sub>1.1</sub>	33.3 <sub>3.7</sub>	27.1 <sub>4.3</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	50.8 <sub>0.6</sub>	35.0 <sub>1.3</sub>	49.3 <sub>2.2</sub>	35.2 <sub>2.1</sub>
	SN	33.2 <sub>2.3</sub>	33.0 <sub>2.3</sub>	18.7 <sub>5.6</sub>	8.1 <sub>2.1</sub>	49.5 <sub>3.3</sub>	36.9 <sub>3.9</sub>	38.1 <sub>1.6</sub>	31.5 <sub>1.2</sub>	<b>55.0<sub>6.8</sub></b>	<b>51.5<sub>6.7</sub></b>
$H_4$	CA	<b>68.2<sub>2.6</sub></b>	<b>68.1<sub>2.6</sub></b>	22.9 <sub>2.6</sub>	11.0 <sub>4.5</sub>	<b>61.5<sub>8.8</sub></b>	<b>60.5<sub>9.0</sub></b>	50.4 <sub>0.2</sub>	34.1 <sub>0.5</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>
	SN	32.7 <sub>1.1</sub>	31.7 <sub>1.4</sub>	15.7 <sub>5.2</sub>	10.9 <sub>4.0</sub>	29.0 <sub>5.5</sub>	28.0 <sub>5.2</sub>	48.0 <sub>0.6</sub>	32.4 <sub>0.3</sub>	52.3 <sub>6.7</sub>	46.9 <sub>7.5</sub>
$H_5$	CA	-	-	9.1 <sub>5.8</sub>	8.0 <sub>7.2</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	50.4 <sub>0.2</sub>	34.1 <sub>0.5</sub>	49.7 <sub>0.7</sub>	33.2 <sub>0.3</sub>
	SN	-	-	<b>46.5<sub>7.3</sub></b>	<b>31.8<sub>3.6</sub></b>	31.0 <sub>3.8</sub>	26.2 <sub>4.6</sub>	49.3 <sub>0.6</sub>	33.0 <sub>0.3</sub>	50.7 <sub>3.2</sub>	36.4 <sub>4.7</sub>
$H_6$	CA	-	-	-	-	53.5 <sub>2.2</sub>	42.6 <sub>3.4</sub>	51.3 <sub>0.6</sub>	36.1 <sub>1.2</sub>	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>
	SN	-	-	-	-	50.0 <sub>0.0</sub>	33.3 <sub>0.0</sub>	46.0 <sub>1.3</sub>	40.5 <sub>1.5</sub>	40.7 <sub>4.3</sub>	36.8 <sub>5.1</sub>

Table 2: **Spanish Validation results** of the hypotheses, CA and SN models. Top results are highlighted with **bold**