Appendix 1. Confusion matrices for gender detection tools ( $n=20,000$ given names with only the second Chinese character if the gender could not be determined with the full two-character given name)

| Gender detection tool | Classified as women <br> $\mathrm{n}(\%)$ | Classified as men <br> $\mathrm{n}(\%)$ | Not classified <br> $\mathrm{n}(\%)$ |
| :--- | :--- | :--- | :--- |
| Gender API | $2947(36.6)$ | $5074(63.1)$ | $23(0.3)$ |
| Women | $2974(24.9)$ | $8935(74.7)$ | $47(0.4)$ |
| Men |  |  |  |
| NamSor | $2278(28.3)$ | $5766(71.7)$ | 0 |
| Women | $2377(19.9)$ | $9579(80.1)$ | 0 |
| Men | $951(11.8)$ | $4302(53.5)$ | $2791(34.7)$ |
| Wiki-Gendersort | $1215(10.1)$ | $6989(58.5)$ | $3752(31.4)$ |
| Women |  |  |  |
| Men |  |  |  |

