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| **Augmenting Product Defect Surveillance through Web Crawling and Machine learning in Singapore**  Pei San Ang1, Desmond Chun Hwee Teo1, Sreemanee Raaj Dorajoo1, Mukundaram Prem Kumar1, Yi Hao Chan1, Chih Tzer Choong1, Doris Sock Tin Phuah1, Dorothy Hooi Myn Tan1, Filina Meixuan Tan1, Huilin Huang1, Maggie Siok Hwee Tan1, Michelle Sau Yuen Ng1, Jalene Wang Woon Poh1  Vigilance and Compliance Branch, Health Products Regulation Group, Health Sciences Authority, Singapore  Drug Safety Journal |

**Supplementary Material 5 – Voting Mechanism**

Table S4: Decision matrix for combined machine learning with keyword-based algorithm

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Machine learning | Positive keywords | Negative keywords | Final decision |
| 1. | 1 | 1 | 1 | 1 = substandard medicine |
| 2. | 1 | 1 | 0 | 1 = substandard medicine |
| 3. | 1 | 0 | 1 | 1 = substandard medicine |
| 4. | 0 | 1 | 1 | 1 = substandard medicine |
| 5. | 1 | 0 | 0 | 0 = non-substandard medicine |
| 6. | 0 | 1 | 0 | 0 = non-substandard medicine |
| 7. | 0 | 0 | 1 | 0 = non-substandard medicine |
| 8. | 0 | 0 | 0 | 0 = non-substandard medicine |

1 = substandard medicine

0 = non-substandard medicine