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# Appendix A

Assamese Basic Characters, Numerals and Selected Conjunct Consonants used for Online Handwritten Sample Collection

| ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Label | A | AA | E | EE | U | UU | REE | AE | OI | O | OU |
| Char | অ | আ | ই | ঈ | উ | ঊ | ঋ | এ | ঐ | ও | ঔ |
| ID | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| Label | KA | KHA | GA | GHA | NG | CA | CCA | JA | JHA | NIYA | MTA |
| Char | ক | খ | গ | ঘ | ঙ | চ | ছ | জ | ঝ | ঞ | ট |
| ID | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| Label | MTHA | MDA | MDHA | MNA | TA | THA | DA | DHA | NA | PA | PHA |
| Char | ঠ | ড | ঢ | ণ | ত | থ | দ | ধ | ন | প | ফ |
| ID | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 |
| Label | BA | BHA | MA | AJA | RA | LA | WA | TXA | MXA | DXA | HA |
| Char | ব | ভ | ম | য | ৰ | ল | ৱ | শ | ষ | স | হ |
| ID | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| Label | KHYA | AYA | DRA | DHRA | KTA | ANSR | BXG | CBN | KK | KT | KTT |
| Char | ক্ষ | য় | ড় | ঢ় | ৎ | ং | ঃ | ঁ | ক্ক | ক্ত | ক্ট |
| ID | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| Label | KS | KL | KM | GL | CC | CCC | JJ | JB | BJ | GN | TN |
| Char | ক্স | ক্ল | ক্ম | গ্ন | চ্চ | চ্ছ | জ্জ | জ্ব | জ্ঞ | গ্ন | ন্ন |
| ID | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| Label | JJB | LG | TT | GDH | GM | GHN | MDD | NT | NN | NMM | TTT |
| Char | জ্জ্ব | গ্ল | ট্ট | গ্ধ | গ্ম | ঘ্ন | ড্ড | ণ্ট | ণ্ন | ণ্ম | ত্ত |
| ID | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| Label | TTB | TM | TR | NTT | RRG | NDD | NTH | NDH | NNN | NB | NS |
| Char | ত্ত্ব | ত্ম | ত্র | ন্ত | ড়্গ | ন্দ | ন্থ | ন্ধ | ন্ন | ন্ব | ন্স |
| ID | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| Label | NM | DB | QJ | PTT | PL | DV | BL | BD | TB | MM | MV |
| Char | ন্ম | দ্ব | ঞ্ছ | প্ত | প্ল | ভ্ড | ল্ল | ব্দ | ত্ব | ম্ম | ম্ভ |

# Appendix A

Assamese Basic Characters, Numerals and Selected Conjunct Consonants used for Online Handwritten Sample Collection (Contd.)

| ID | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Label | MP | MN | NTR | MB | LK | MND | FK | LD | LL | LP | LT |
| Char | ম্প | ন্ম | ন্ত্র | ম্ব | ল্ক | ণ্ড | ঙ্ক | ল্ড | ল্ল | ম্প | ল্ট |
| ID | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 |
| Label | SN | SC | SM | SB | FN | FT | SK | SSTH | SSM | SSN | SSB |
| Char | শ্ন | শ্চ | শ্ম | শ্ব | ষ্ণ | ষ্ট | স্ক | ষ্ঠ | স্ম | স্ন | স্ব |
| ID | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 |
| Label | ST | SP | SPH | STH | SKH | NGG | NGC | FP | NGN | XM | NGJ |
| Char | স্ত | স্প | স্ফ | স্থ | স্খ | ঙ্গ | ঞ্চ | ম্প | ঞ্জ | ক্ষ্ম | ঞ্ছ |
| ID | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 |
| Label | MNTH | NGK | KR | TRU | BHR | THB | DG | DGH | DD | DDH | HR |
| Char | ণ্ঠ | ঙ্ক | ক্র | ক্র | ভ্র | থ্ব | দ্গ | দ্ঘ | দ্দ | দ্ধ | হ্ম |
| ID | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 |
| Label | GGU | GGN | NKH | NGH | NGKH | TTH | PN | HN | XN | MF | BB |
| Char | গু | ঞ্ঞ | ঙ্খ | ঙ্ঘ | ঙ্ক্ষ | থ্ব | প্ন | হ্ন | ক্ষ্ণ | স্ফ | ব্ব |
| ID | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 |
| Label | LB | LM | BHM | ML | SL | PS | KHR | GR | GHR | JR | TRR |
| Char | ল্ব | ল্ম | হ্ম | ম্ল | শ্ল | ঙ্গ | খ্র | গ্র | ঘ্র | জ্র | ট্র |
| ID | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 |
| Label | DRR | DHRR | PRR | BRR | MRR | TSR | DSR | HRR | SUNYA | EK | DUI |
| Char | দ্র | ধ্র | প্র | ব্র | ম্র | শ্র | স্র | হ্র | ০ | ১ | ২ |
| ID | 177 | 178 | 179 | 180 | 181 | 182 | 183 | | | | |
| Label | TINI | CARI | PAC | CAY | XAT | ATH | NAA | | | | |
| Char | ৩ | ৪ | ৫ | ৬ | ৭ | ৮ | ৯ | | | | |

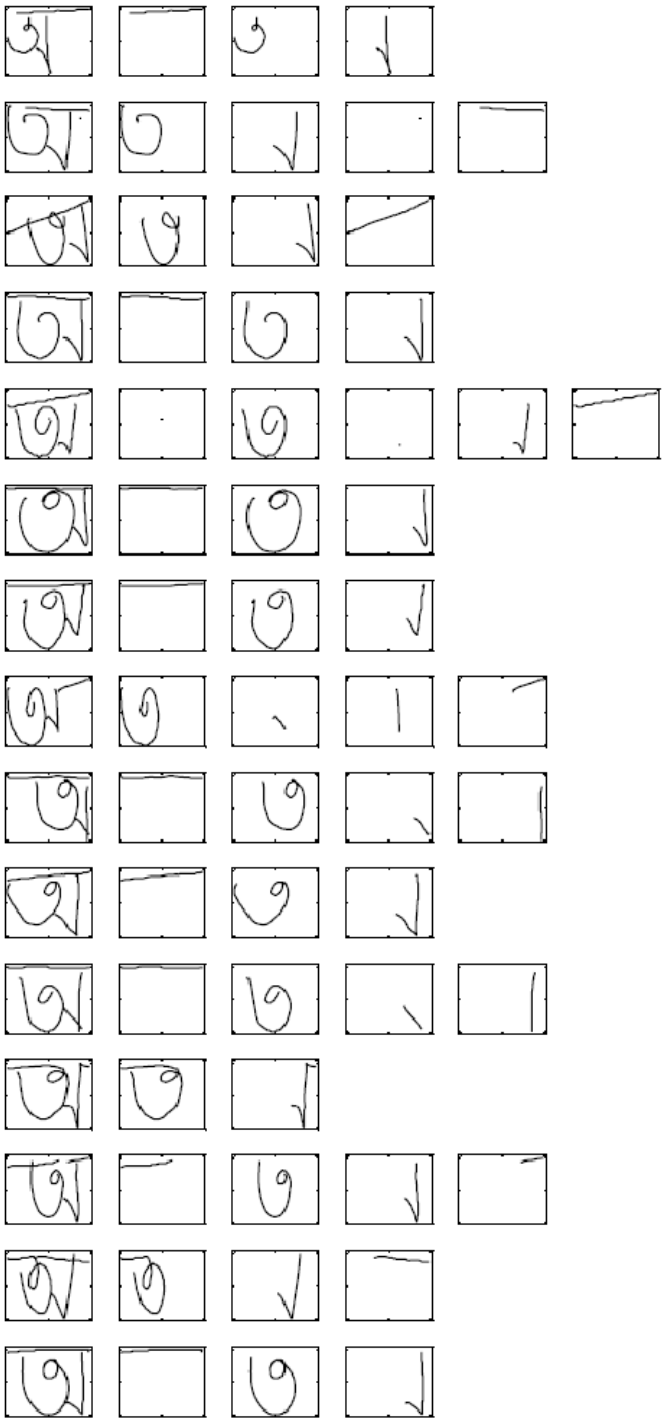
# Appendix B

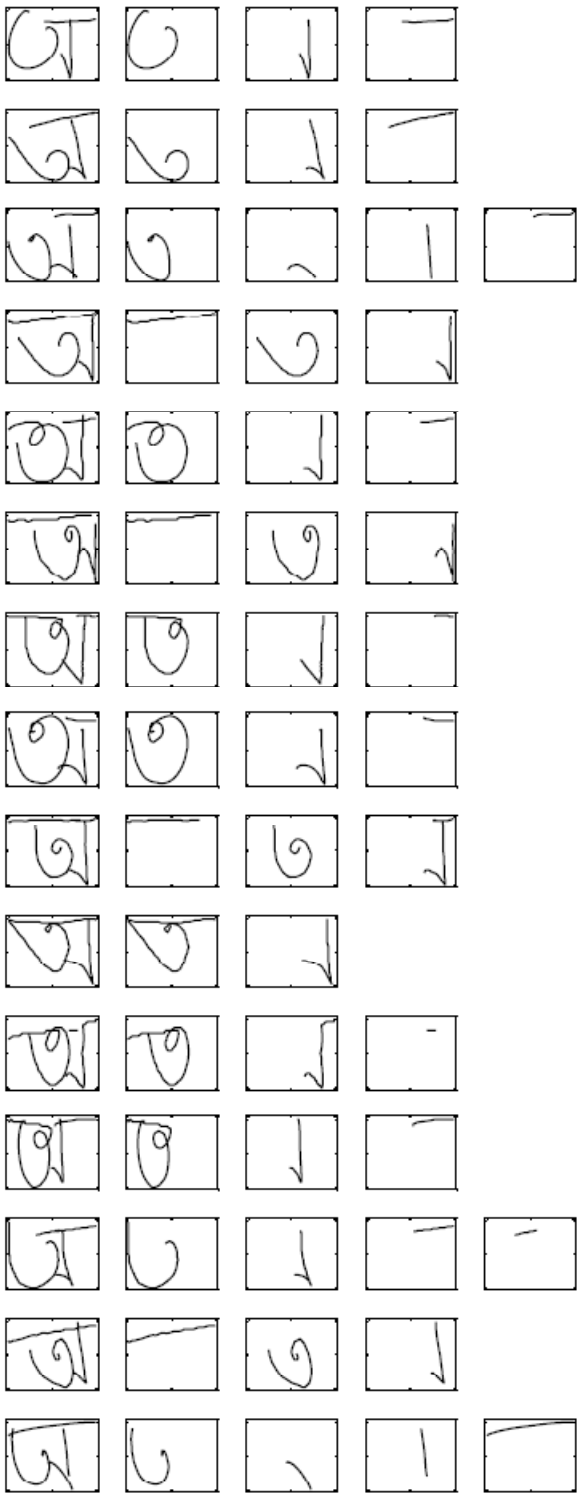
```
CHARACTER_NAME: TTT
STROKE_COUNT: 2
 X       Y      STYLUS_STATE      STROKE
PEN_DOWN
1217    1217        1                 1
1191    1217        1                 1
1244    1217        1                 1
1323    1217        1                 1
1429    1217        1                 1
1561    1217        1                 1
1720    1217        1                 1
1905    1217        1                 1
2090    1217        1                 1
2302    1217        1                 1
2461    1217        1                 1
2619    1217        1                 1
2752    1217        1                 1
2831    1217        1                 1
2910    1217        1                 1
2963    1217        1                 1
2990    1217        1                 1
2963    1244        1                 1
2937    1244        1                 1
PEN_UP              0
PEN_DOWN
2143    1693        1                 2
2170    1720        1                 2
2170    1693        1                 2
2196    1693        1                 2
2196    1667        1                 2
2223    1640        1                 2
2249    1614        1                 2
2302    1614        1                 2
2355    1588        1                 2
2434    1614        1                 2
2514    1640        1                 2
2593    1667        1                 2
2646    1720        1                 2
2725    1773        1                 2
2778    1826        1                 2
2805    1879        1                 2
2805    1931        1                 2
2805    1984        1                 2
2778    2037        1                 2
2725    2090        1                 2
2646    2117        1                 2
2593    2170        1                 2
2514    2196        1                 2
2461    2223        1                 2
2408    2249        1                 2
2381    2275        1                 2
2408    2249        1                 2
2434    2223        1                 2
2461    2223        1                 2
2514    2223        1                 2
2566    2196        1                 2
2646    2223        1                 2
2725    2223        1                 2
2805    2275        1                 2
2858    2328        1                 2
2910    2381        1                 2
2937    2434        1                 2
2963    2514        1                 2
2990    2566        1                 2
2963    2619        1                 2
2937    2672        1                 2
2884    2725        1                 2
2805    2752        1                 2
2725    2752        1                 2
2619    2752        1                 2
2514    2725        1                 2
2381    2699        1                 2
2275    2619        1                 2
2170    2540        1                 2
2064    2434        1                 2
1958    2328        1                 2
1879    2196        1                 2
1826    2064        1                 2
1773    1931        1                 2
1746    1799        1                 2
1720    1667        1                 2
1693    1588        1                 2
1720    1535        1                 2
1720    1482        1                 2
1746    1455        1                 2
1746    1429        1                 2
PEN_UP              0
END_CHARACTER: TTT
```

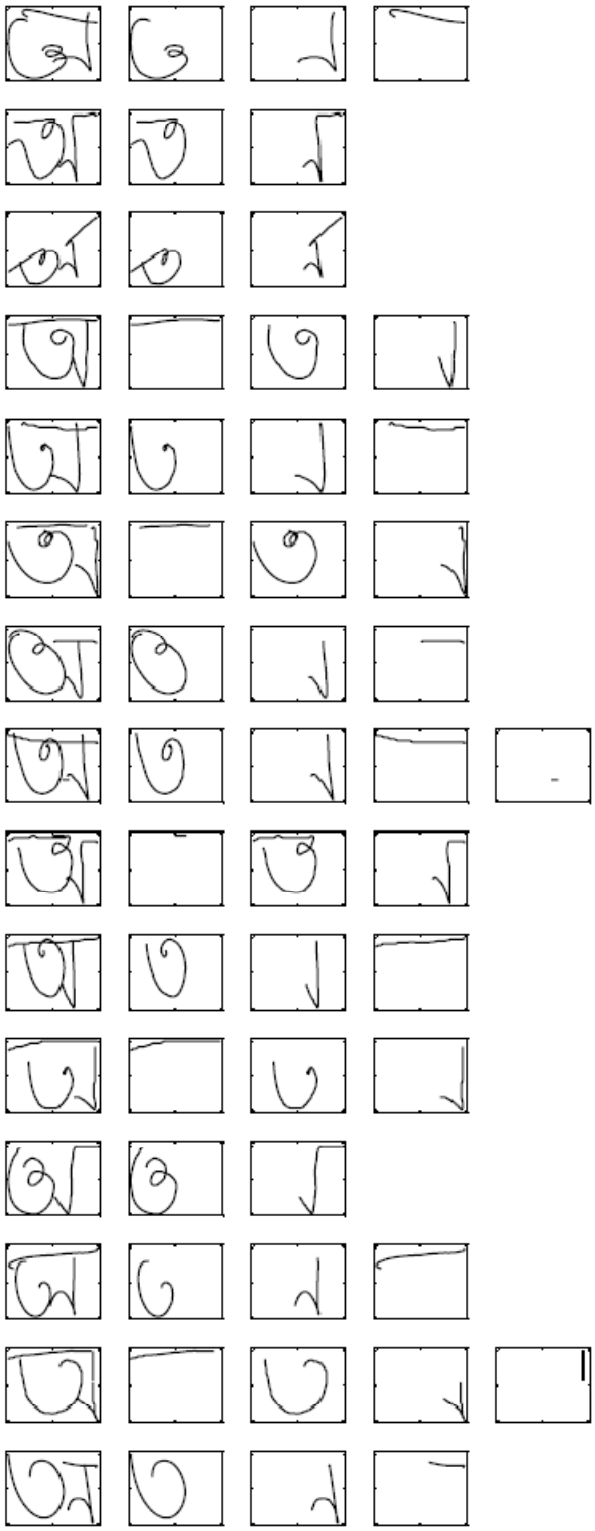
The .TXT file representation of the character TTT corresponding to Writer ID 37

# Appendix C

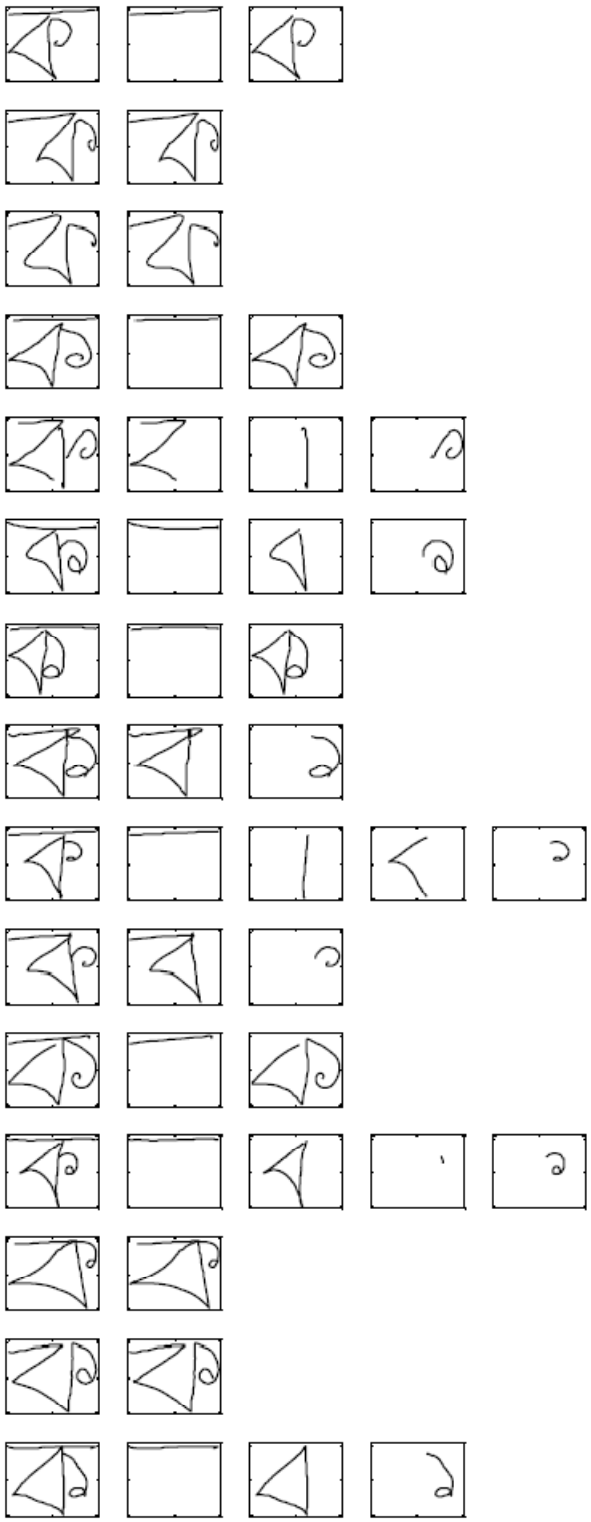
*List of all stroke sequences of the character* A (অ) (45 in Number)

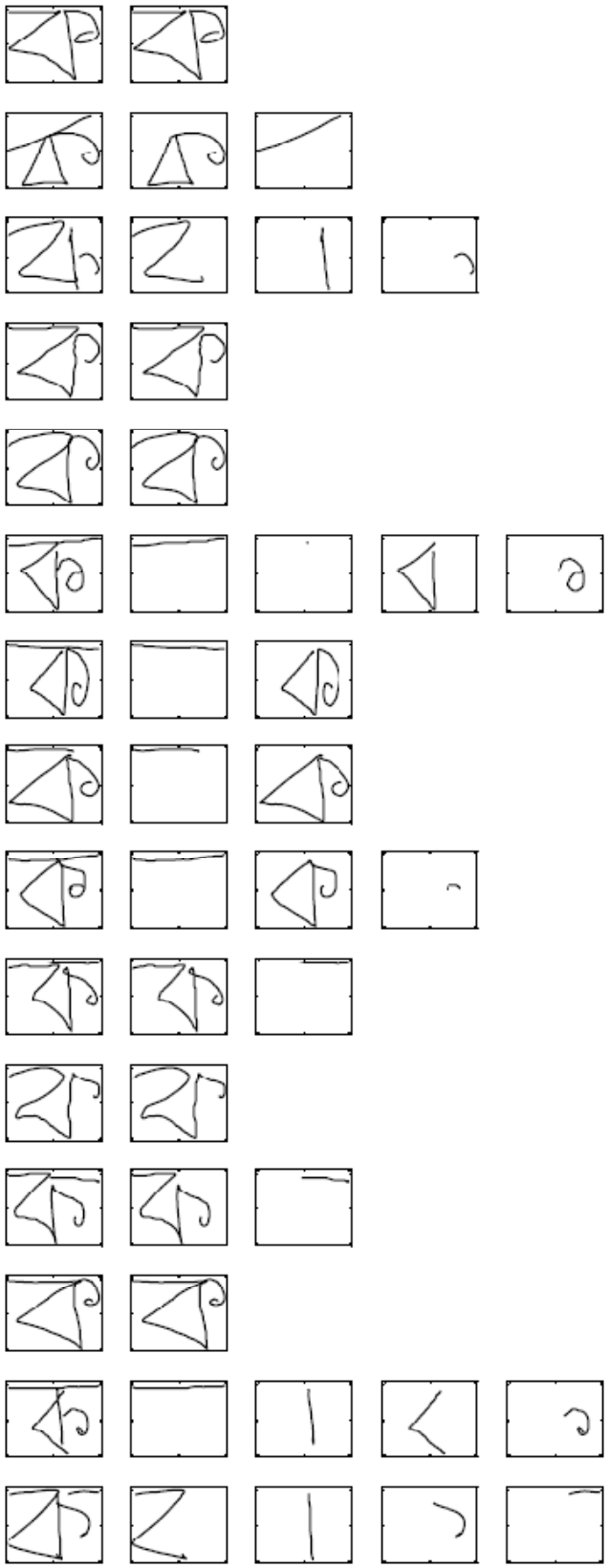


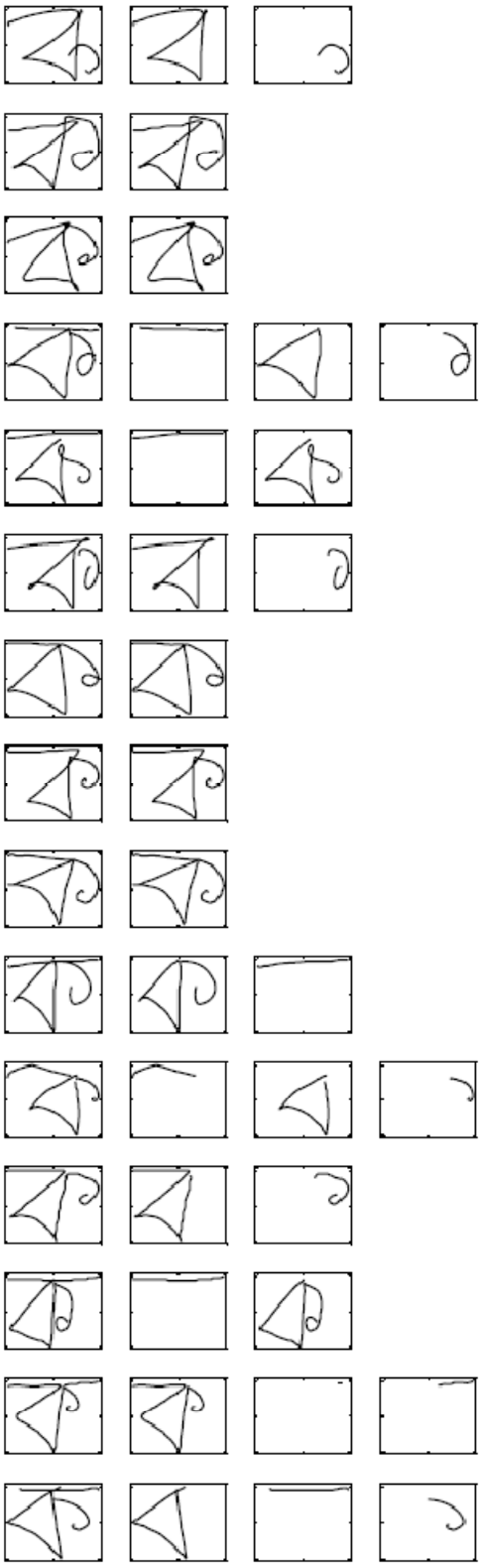




*List of all stroke sequences of the character* KA (ক) (45 in Number)

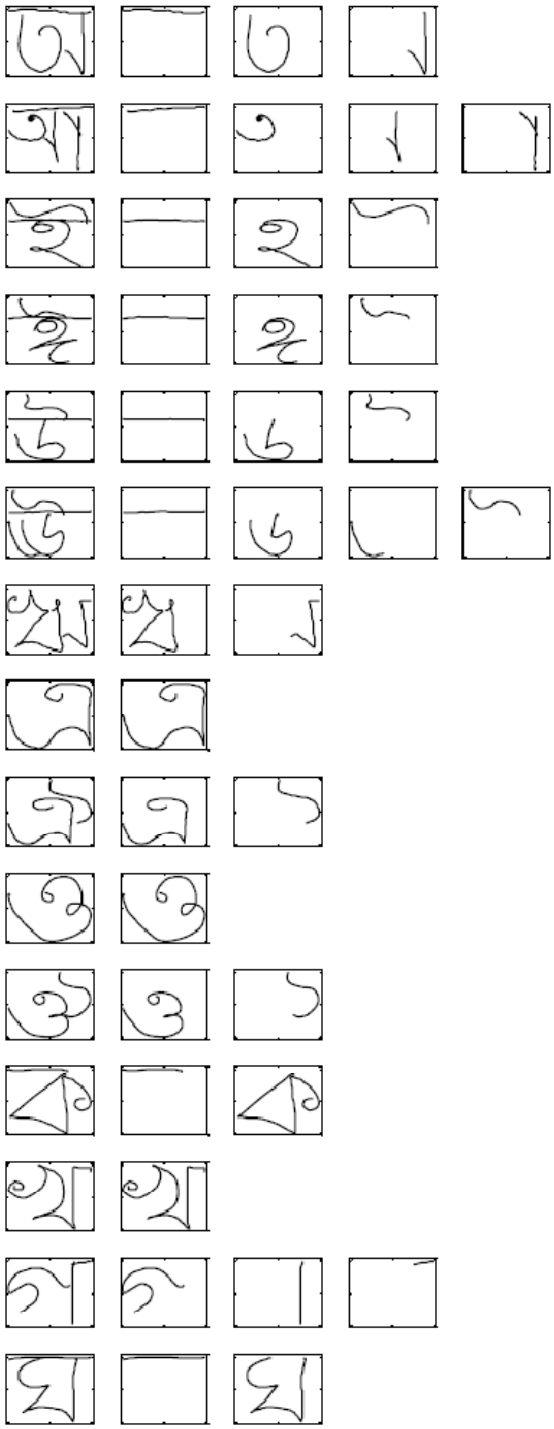


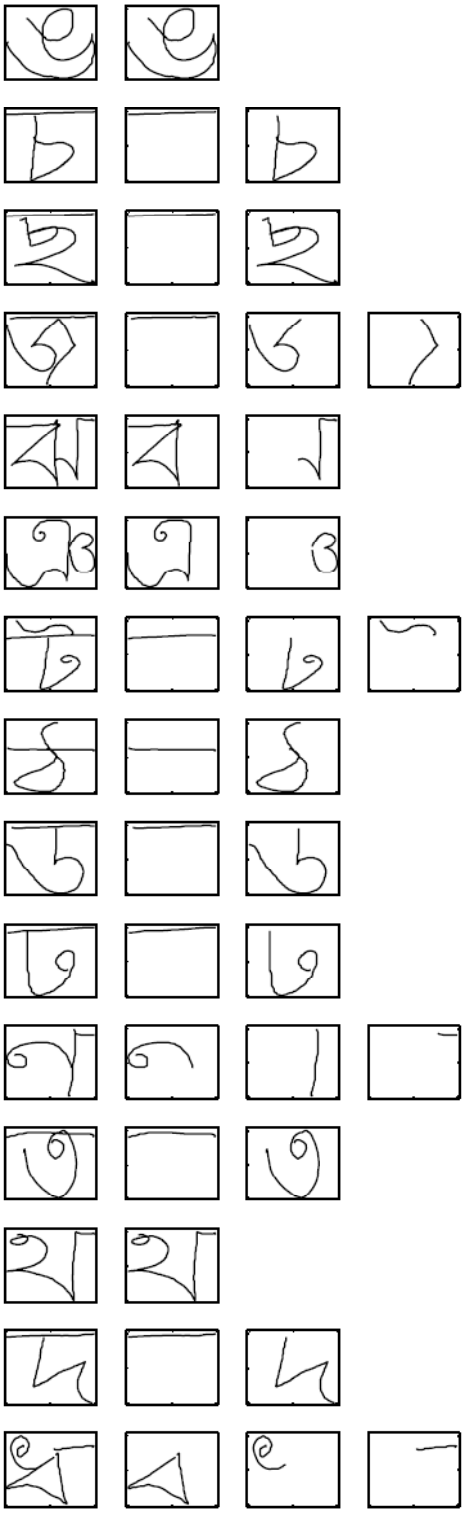


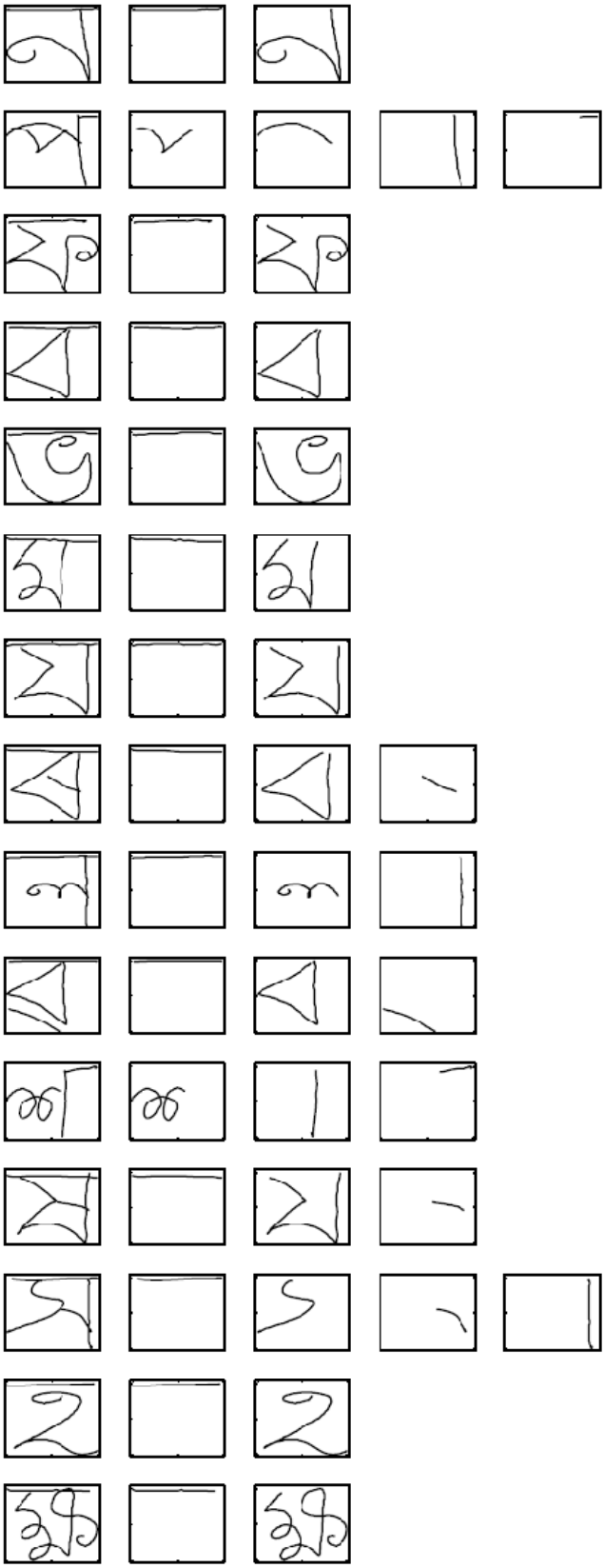


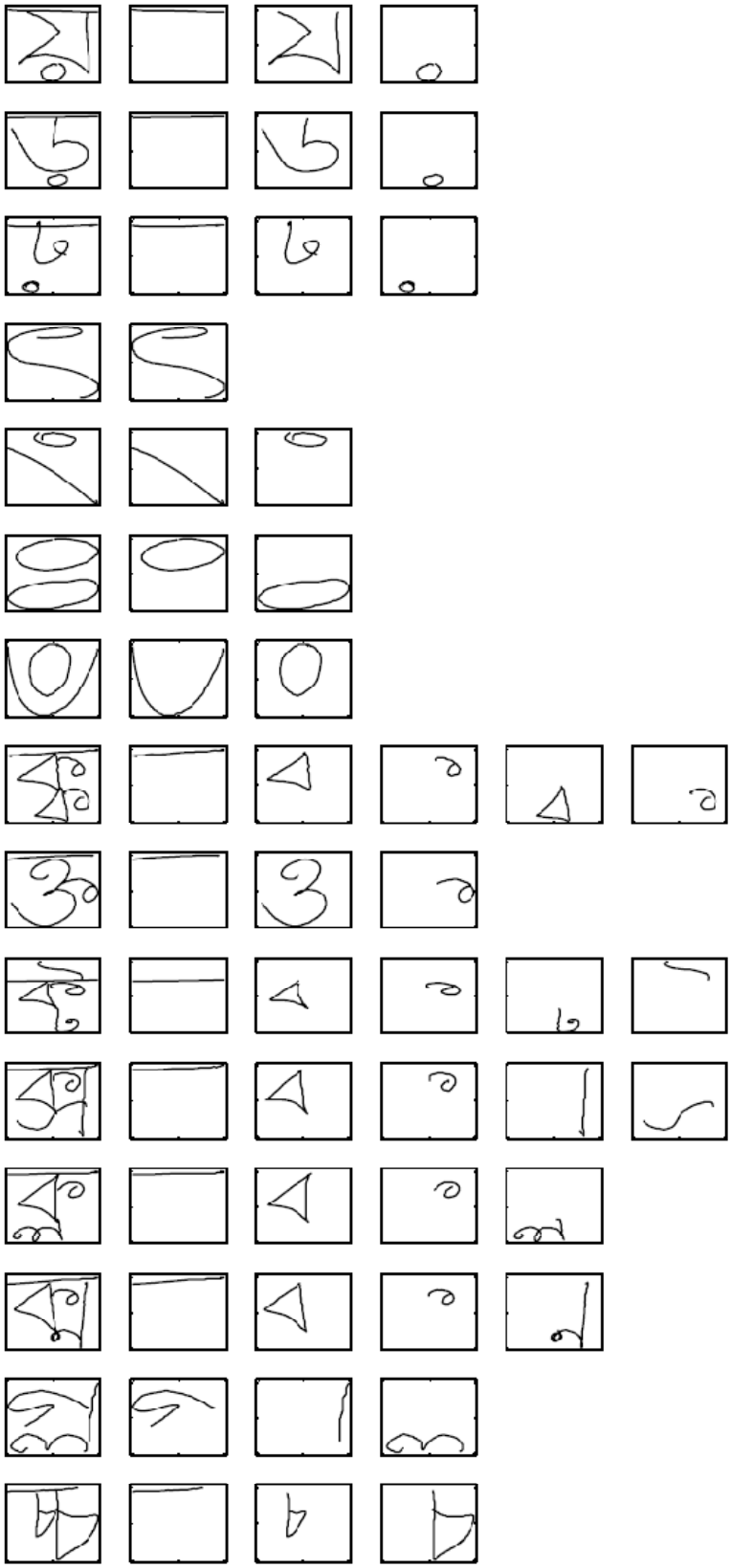
# Appendix D

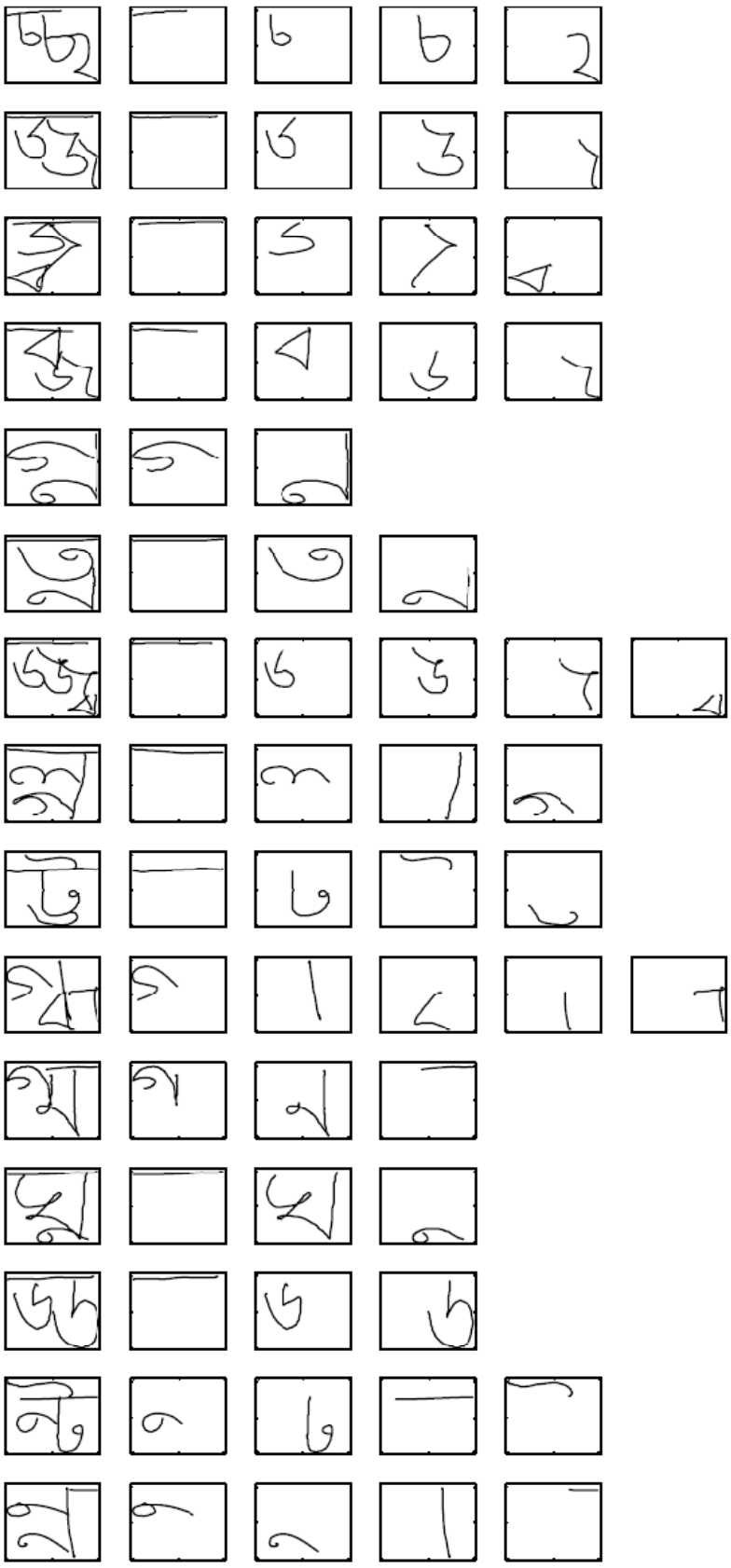
*Figures of all the 183 individual characters with their representative stroke sequences*

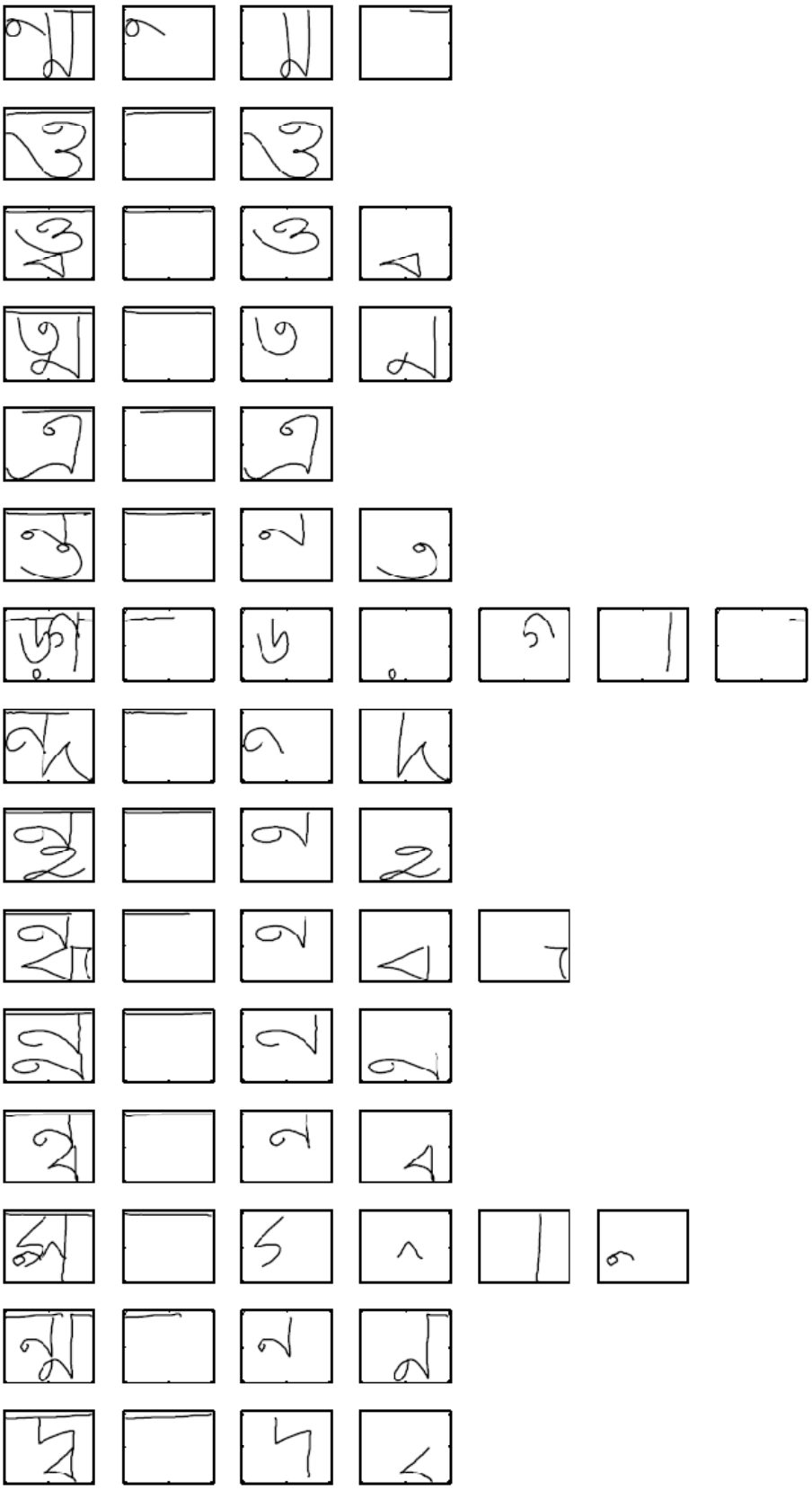


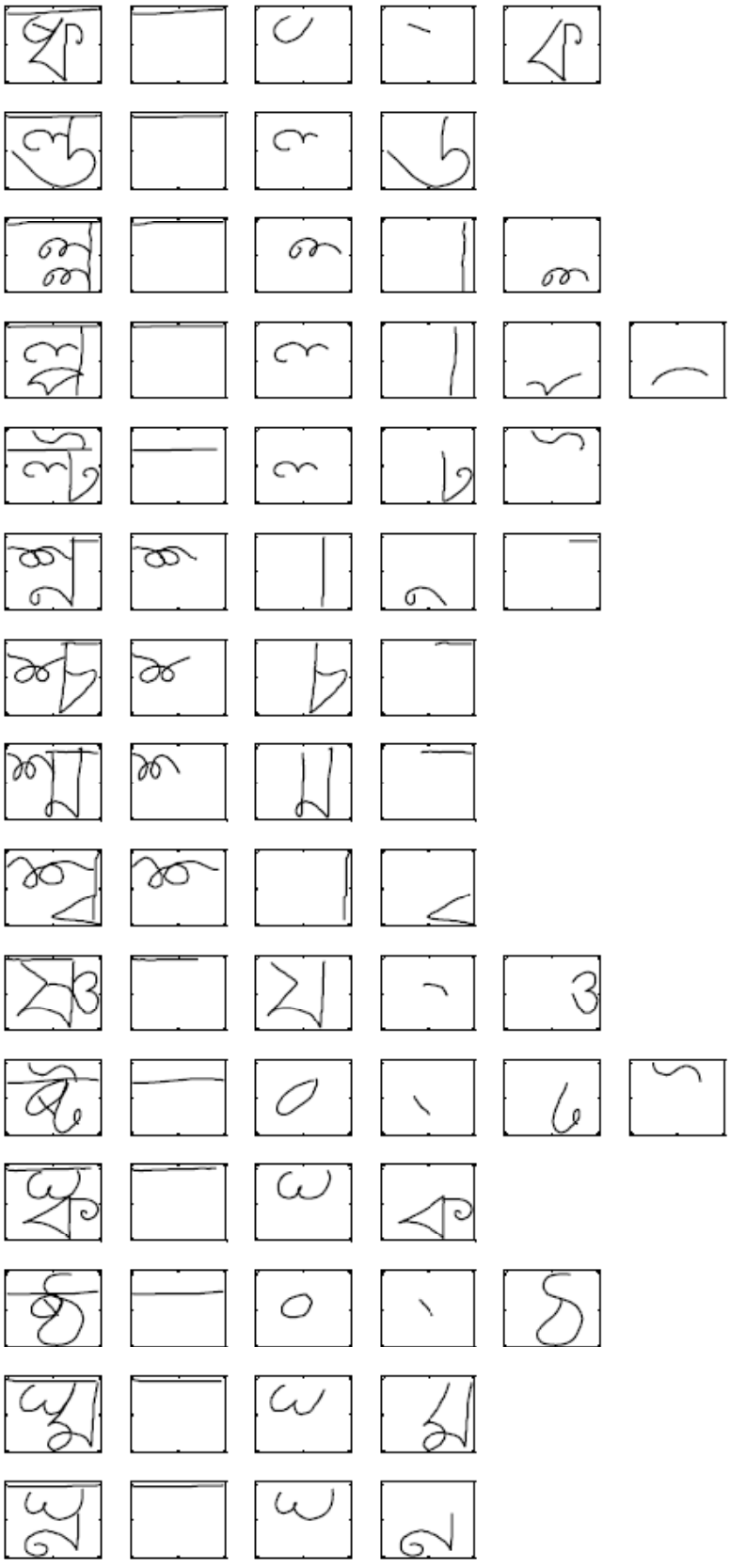


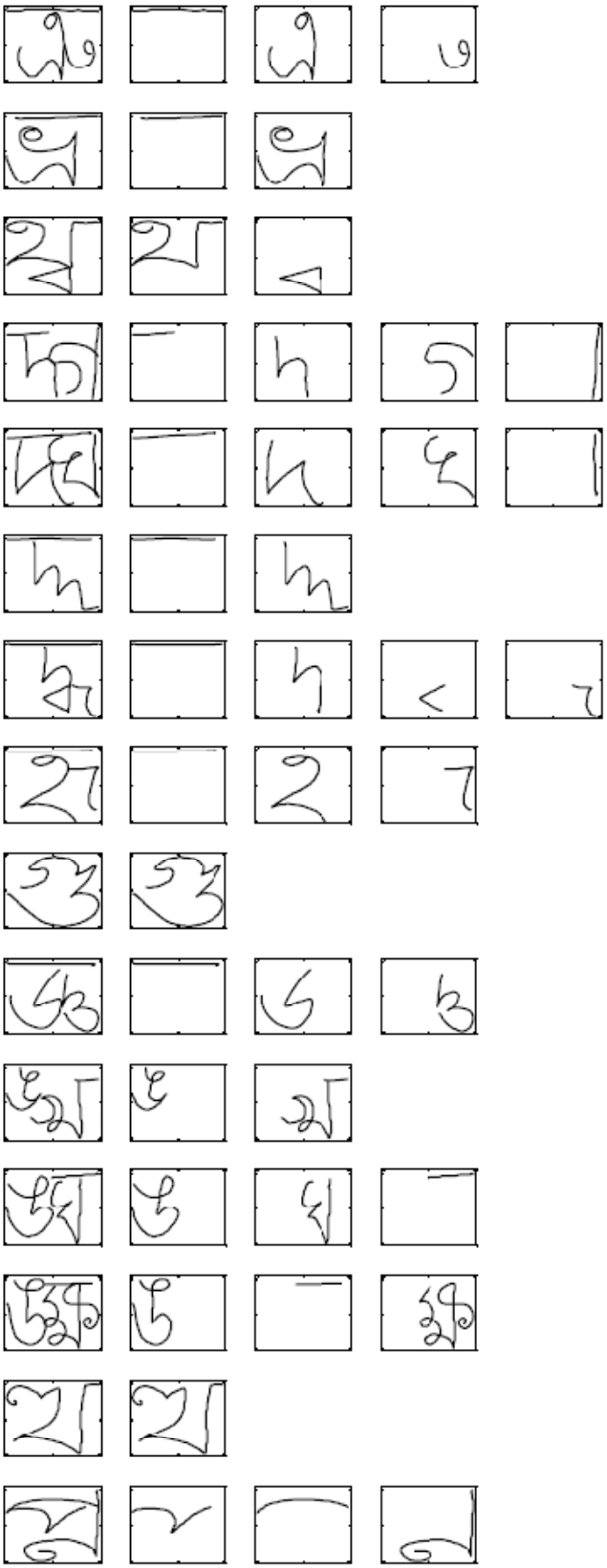


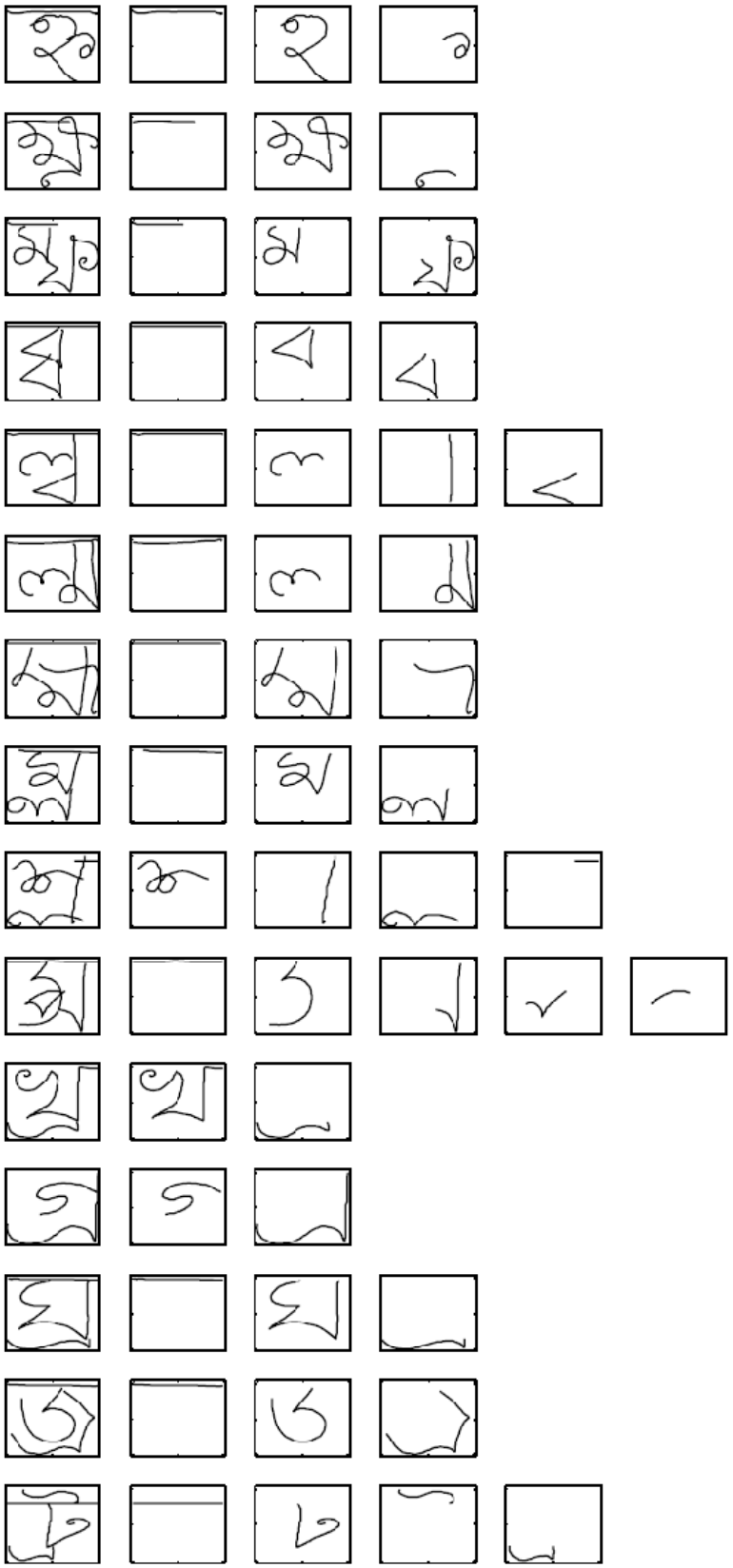


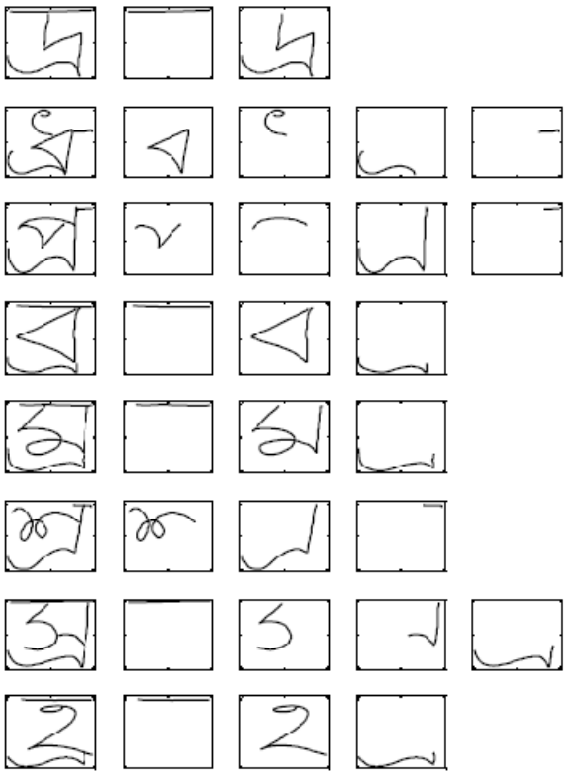


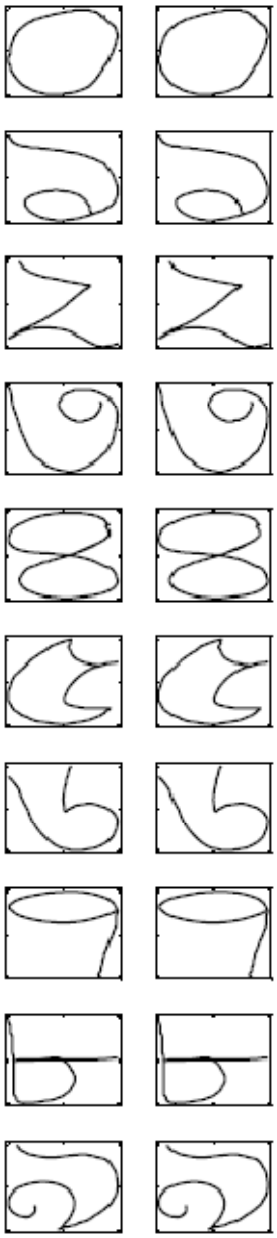












# *Publication*

Udayan Baruah and Shyamanta M Hazarika, “A Dataset of Online Handwritten Assamese Characters”, Journal of Information Processing Systems, Published Online First, 20 October, 2014.