**Question 5**

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# Input file for classification forest

GUIDE (do not edit this file unless you know what you are doing)

36.2 (version of GUIDE that generated this file)

1 (1=model fitting, 2=importance or DIF scoring, 3=data conversion)

"gf.out" (name of output file)

2 (1=one tree, 2=ensemble)

2 (1=bagging, 2=rforest)

2 (1=random splits of missing values, 2=nonrandom)

1 (1=classification, 2=regression)

2 (1=interaction tests, 2=skip them)

"ceclass.dsc" (name of data description file)

1 (1=accept default number of trees, 2=change)

1 (1=accept default number of variables for splitting, 2=change it)

1 (1=estimated priors, 2=equal priors, 3=other priors)

1 (1=unit misclassification costs, 2=other)

1 (1=split point from quantiles, 2=use exhaustive search)

1 (1=accept default splitting fraction, 2=change it)

1 (1=default max. number of split levels, 2=specify no. in next line)

1 (1=default min. node size, 2=specify min. value in next line)

"gf.prp" (file name for predicted class and probability estimates)

1 (rank of top variable to split root node)

# Output file for classification forest

GGG U U I DDDD EEEE

G G U U I D D E

G U U I D D E

G GG U U I D D EEE

G G U U I D D E

G G U U I D D E

GGG UUU I DDDD EEEE

GUIDE Classification and Regression Trees and Forests

Version 36.2 (Build date: January 8, 2021)

Compiled with GFortran 10.2.0 on macOS Big Sur 11.1

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This software is based upon work supported by the U.S. Army Research Office,

the National Science Foundation and the National Institutes of Health.

This job was started on 03/10/21 at 15:44

Random forest of classification trees

No pruning

Data description file: ceclass.dsc

Training sample file: cedata.txt

Missing value code: NA

Records in data file start on line 2

Number of M variables associated with C variables: 33

422 N variables changed to S

D variable is INTRDVX\_

Number of records in data file: 4693

Length of longest entry in data file: 11

Missing values found among categorical variables

Separate categories will be created for missing categorical variables

Missing values found among non-categorical variables

Number of classes: 3

Warning: S variable MISC2PQ is constant

Warning: S variable MISC2CQ is constant

Warning: S variable TCARTRKP is constant

Warning: S variable TCARTRKC is constant

Warning: S variable TOTHVHRP is constant

Warning: S variable TOTHVHRC is constant

Warning: S variable VMISCHEP is constant

Warning: S variable VMISCHEC is constant

Warning: S variable ROTHRFLP is constant

Warning: S variable ROTHRFLC is constant

Smallest and largest positive weights are 1.3507E+03 and 7.0269E+04

Training sample class proportions of D variable INTRDVX\_:

Class #Cases Proportion

C 1771 0.37737055

D 2838 0.60473045

T 84 0.01789900

Summary information for training sample of size 4693

d=dependent, b=split and fit cat variable using indicator variables,

c=split-only categorical, i=fit-only categorical (via indicators),

s=split-only numerical, n=split and fit numerical, f=fit-only numerical,

m=missing-value flag variable, p=periodic variable, w=weight

Levels of M variables are for missing values in associated variables

#Codes/

Levels/

Column Name Minimum Maximum Periods #Missing

1 DIRACC c 2 155

2 DIRACC\_ m 1

3 AGE\_REF s 18.00 87.00

4 AGE\_REF\_ m 0

5 AGE2 s 22.00 87.00 1903

6 AGE2\_ m 1

7 AS\_COMP1 s 0.000 4.000

8 AS\_C\_MP1 m 0

9 AS\_COMP2 s 0.000 4.000

10 AS\_C\_MP2 m 0

11 AS\_COMP3 s 0.000 4.000

12 AS\_C\_MP3 m 0

13 AS\_COMP4 s 0.000 4.000

14 AS\_C\_MP4 m 0

15 AS\_COMP5 s 0.000 2.000

16 AS\_C\_MP5 m 0

17 BATHRMQ s 1.000 8.000 21

18 BATHRMQ\_ m 2

19 BEDROOMQ s 0.000 9.000 25

20 BEDR\_OMQ m 2

21 BLS\_URBN s 1.000 2.000

22 BUILDING c 11

23 BUIL\_ING m 0

24 CUTENURE c 6

25 CUTE\_URE m 0

26 EARNCOMP c 9

27 EARN\_OMP m 0

28 EDUC\_REF s 10.00 16.00

29 EDUC0REF m 0

30 EDUCA2 s 10.00 16.00 1903

31 EDUCA2\_ m 1

32 FAM\_SIZE s 1.000 9.000

33 FAM\_\_IZE m 0

34 FAM\_TYPE c 10

35 FAM\_\_YPE m 0

36 FAMTFEDX s 0.000 0.9928E+05

37 FAMT\_EDX m 0

38 FEDRFNDX s 4.000 0.1428E+05 2597

39 FEDR\_NDX m 2

40 FEDTAXX s 2.000 0.8223E+05 3793

41 FEDTAXX\_ m 2

42 FGOVRETX s 0.000 0.2469E+05

43 FGOV\_ETX m 0

44 FINCATAX s -0.3380E+06 0.1410E+07

45 FINCAT\_X m 0

46 FINCBTAX s -0.3430E+06 0.1410E+07

47 FINCBT\_X m 0

48 FINDRETX s 0.000 0.1272E+06

49 FIND\_ETX m 0

50 FINLWT21 w 1351. 0.7027E+05

51 FJSSDEDX s 0.000 0.3042E+05

52 FJSS\_EDX m 0

53 FPRIPENX s 0.000 0.5902E+05

54 FPRI\_ENX m 0

55 FRRDEDX s 0.000 9980.

56 FRRDEDX\_ m 0

57 FRRETIRX s 0.000 0.5807E+05

58 FRRE\_IRX m 0

59 FSALARYX s 0.000 0.5301E+06

60 FSAL\_RYX m 0

61 FSLTAXX s 0.000 0.3010E+05

62 FSLTAXX\_ m 0

63 FSSIX s 0.000 0.3048E+05

64 FSSIX\_ m 0

65 HLFBATHQ s 0.000 4.000 23

66 HLFB\_THQ m 2

67 INC\_HRS1 s 1.000 93.00 1744

68 INC\_\_RS1 m 1

69 INC\_HRS2 s 1.000 99.00 2886

70 INC\_\_RS2 m 1

71 INC\_RANK s 0.1000E-03 1.000 367

72 INC\_\_ANK m 1

73 INCNONW1 c 6 2949

74 INCN\_NW1 m 1

75 INCNONW2 c 6 3710

76 INCN\_NW2 m 1

77 INCOMEY1 c 6 1744

78 INCO\_EY1 m 1

79 INCOMEY2 c 6 2886

80 INCO\_EY2 m 1

81 INCWEEK1 s 0.000 52.00

82 INCW\_EK1 m 0

83 INCWEEK2 s 0.000 52.00 1903

84 INCW\_EK2 m 1

85 MISCTAXX s 5.000 0.2524E+05 4601

86 MISC\_AXX m 3

87 LUMPSUMX s 4.000 0.5492E+06 4454

88 LUMP\_UMX m 2

89 MARITAL1 c 6

90 MARI\_AL1 m 0

91 NO\_EARNR s 0.000 6.000

92 NO\_E\_RNR m 0

93 NONINCMX s 0.000 0.5492E+06

94 NONI\_CMX m 0

95 NUM\_AUTO s 0.000 7.000

96 NUM\_\_UTO m 0

97 OCCUCOD1 c 15 1744

98 OCCU\_OD1 m 1

99 OCCUCOD2 c 15 2886

100 OCCU\_OD2 m 1

101 OTHRINCX s 2.000 0.5788E+05 4566

102 OTHR\_NCX m 2

103 PERSLT18 s 0.000 7.000

104 PERS\_T18 m 0

105 PERSOT64 s 0.000 4.000

106 PERS\_T64 m 0

107 POPSIZE s 1.000 5.000 38

108 PRINEARN c 8

109 PRIN\_ARN m 0

110 QINTRVMO c 12

111 QINTRVYR c 2

112 RACE2 c 6 1903

113 RACE2\_ m 1

114 REF\_RACE c 7

115 REF\_\_ACE m 0

116 REGION c 4 38

117 RENTEQVX s 1.000 4694. 667

118 RENT\_QVX m 1

119 RESPSTAT c 3

120 RESP\_TAT m 0

121 ROOMSQ s 1.000 19.00 30

122 ROOMSQ\_ m 2

123 SEX\_REF c 3

124 SEX\_REF\_ m 0

125 SEX2 c 2 1903

126 SEX2\_ m 1

127 SLOCTAXX s 1.000 0.2657E+05 4053

128 SLOC\_AXX m 2

129 SLRFUNDX s 1.000 4169. 3242

130 SLRF\_NDX m 2

131 SMSASTAT c 2

132 ST\_HOUS c 3

133 ST\_HOUS\_ m 0

134 TOTTXPDX s -0.1845E+05 0.1467E+06

135 TOTT\_PDX m 0

136 VEHQ s 0.000 17.00

137 VEHQ\_ m 0

138 WELFAREX s 300.0 4344. 4680

139 WELF\_REX m 2

140 TOTEXPPQ s 233.2 0.2782E+06

141 TOTEXPCQ s -3759. 0.9669E+05

142 FOODPQ s 0.000 0.2358E+05

143 FOODCQ s 0.000 7363.

144 FDHOMEPQ s 0.000 8450.

145 FDHOMECQ s 0.000 6067.

146 FDAWAYPQ s 0.000 0.2098E+05

147 FDAWAYCQ s 0.000 5660.

148 FDXMAPPQ s 0.000 0.2098E+05

149 FDXMAPCQ s 0.000 5660.

150 FDMAPPQ s 0.000 900.0

151 FDMAPCQ s 0.000 666.7

152 ALCBEVPQ s 0.000 3152.

153 ALCBEVCQ s 0.000 2550.

154 HOUSPQ s 0.000 0.1811E+06

155 HOUSCQ s -2196. 0.3466E+05

156 SHELTPQ s 0.000 0.4074E+05

157 SHELTCQ s 0.000 0.3354E+05

158 OWNDWEPQ s 0.000 0.3070E+05

159 OWNDWECQ s 0.000 0.3321E+05

160 MRTINTPQ s 0.000 0.2531E+05

161 MRTINTCQ s 0.000 0.1112E+05

162 PROPTXPQ s 0.000 5870.

163 PROPTXCQ s 0.000 4247.

164 MRPINSPQ s 0.000 0.2110E+05

165 MRPINSCQ s 0.000 0.2373E+05

166 RENDWEPQ s 0.000 8546.

167 RENDWECQ s 0.000 6742.

168 RNTXRPPQ s 0.000 8546.

169 RNTXRPCQ s 0.000 6742.

170 RNTAPYPQ s 0.000 2922.

171 RNTAPYCQ s 0.000 3000.

172 OTHLODPQ s 0.000 0.3342E+05

173 OTHLODCQ s 0.000 0.1367E+05

174 UTILPQ s 0.000 7581.

175 UTILCQ s 0.000 3921.

176 NTLGASPQ s 0.000 2306.

177 NTLGASCQ s 0.000 885.0

178 ELCTRCPQ s 0.000 4473.

179 ELCTRCCQ s 0.000 3261.

180 ALLFULPQ s 0.000 2752.

181 ALLFULCQ s 0.000 3081.

182 FULOILPQ s 0.000 2752.

183 FULOILCQ s 0.000 3081.

184 OTHFLSPQ s 0.000 1981.

185 OTHFLSCQ s 0.000 2269.

186 TELEPHPQ s 0.000 1638.

187 TELEPHCQ s 0.000 1907.

188 WATRPSPQ s 0.000 1880.

189 WATRPSCQ s 0.000 1035.

190 HOUSOPPQ s -37.00 0.2493E+05

191 HOUSOPCQ s -4868. 0.1815E+05

192 DOMSRVPQ s -37.00 0.2003E+05

193 DOMSRVCQ s -4960. 0.1805E+05

194 DMSXCCPQ s -37.00 0.2003E+05

195 DMSXCCCQ s -4960. 0.1000E+05

196 BBYDAYPQ s 0.000 0.1500E+05

197 BBYDAYCQ s 0.000 0.1740E+05

198 OTHHEXPQ s 0.000 0.2493E+05

199 OTHHEXCQ s 0.000 5653.

200 HOUSEQPQ s 0.000 0.1544E+06

201 HOUSEQCQ s 0.000 0.2268E+05

202 TEXTILPQ s 0.000 4000.

203 TEXTILCQ s 0.000 2946.

204 FURNTRPQ s 0.000 0.7500E+05

205 FURNTRCQ s 0.000 0.1811E+05

206 FLRCVRPQ s 0.000 0.1000E+05

207 FLRCVRCQ s 0.000 5500.

208 MAJAPPPQ s 0.000 0.1802E+05

209 MAJAPPCQ s 0.000 0.1200E+05

210 SMLAPPPQ s 0.000 3000.

211 SMLAPPCQ s 0.000 944.0

212 MISCEQPQ s 0.000 0.6510E+05

213 MISCEQCQ s 0.000 7155.

214 APPARPQ s 0.000 0.2440E+05

215 APPARCQ s 0.000 4604.

216 MENBOYPQ s 0.000 4200.

217 MENBOYCQ s 0.000 1797.

218 MENSIXPQ s 0.000 4200.

219 MENSIXCQ s 0.000 1797.

220 BOYFIFPQ s 0.000 2150.

221 BOYFIFCQ s 0.000 448.0

222 WOMGRLPQ s 0.000 4540.

223 WOMGRLCQ s 0.000 2958.

224 WOMSIXPQ s 0.000 4474.

225 WOMSIXCQ s 0.000 2958.

226 GRLFIFPQ s 0.000 1799.

227 GRLFIFCQ s 0.000 1624.

228 CHLDRNPQ s 0.000 717.0

229 CHLDRNCQ s 0.000 961.0

230 FOOTWRPQ s 0.000 2162.

231 FOOTWRCQ s 0.000 1148.

232 OTHAPLPQ s 0.000 0.2048E+05

233 OTHAPLCQ s 0.000 4076.

234 TRANSPQ s 0.000 0.8778E+05

235 TRANSCQ s 0.000 0.6490E+05

236 CARTKNPQ s 0.000 0.8700E+05

237 CARTKNCQ s 0.000 0.6480E+05

238 CARTKUPQ s 0.000 0.4200E+05

239 CARTKUCQ s 0.000 0.4163E+05

240 OTHVEHPQ s 0.000 0.1417E+05

241 OTHVEHCQ s 0.000 0.1800E+05

242 GASMOPQ s 0.000 4832.

243 GASMOCQ s 0.000 6400.

244 VEHFINPQ s 0.000 1201.

245 VEHFINCQ s 0.000 716.0

246 MAINRPPQ s 0.000 0.1400E+05

247 MAINRPCQ s 0.000 8060.

248 VEHINSPQ s 0.000 4236.

249 VEHINSCQ s 0.000 3800.

250 VRNTLOPQ s 0.000 0.2200E+05

251 VRNTLOCQ s 0.000 0.2223E+05

252 PUBTRAPQ s 0.000 0.2287E+05

253 PUBTRACQ s 0.000 0.1198E+05

254 TRNTRPPQ s 0.000 0.2287E+05

255 TRNTRPCQ s 0.000 0.1198E+05

256 TRNOTHPQ s 0.000 1448.

257 TRNOTHCQ s 0.000 1386.

258 HEALTHPQ s -2402. 0.1665E+05

259 HEALTHCQ s -0.1281E+05 0.2189E+05

260 HLTHINPQ s 0.000 0.1426E+05

261 HLTHINCQ s 0.000 8789.

262 MEDSRVPQ s -3290. 0.1543E+05

263 MEDSRVCQ s -0.1330E+05 0.1368E+05

264 PREDRGPQ s -940.0 6844.

265 PREDRGCQ s -260.0 2800.

266 MEDSUPPQ s -3600. 7000.

267 MEDSUPCQ s -449.0 7530.

268 ENTERTPQ s 0.000 0.6318E+05

269 ENTERTCQ s 0.000 0.4249E+05

270 FEEADMPQ s 0.000 0.1958E+05

271 FEEADMCQ s 0.000 0.1577E+05

272 TVRDIOPQ s 0.000 7007.

273 TVRDIOCQ s 0.000 5143.

274 OTHEQPPQ s 0.000 0.6300E+05

275 OTHEQPCQ s 0.000 0.4204E+05

276 PETTOYPQ s 0.000 0.1165E+05

277 PETTOYCQ s 0.000 5657.

278 OTHENTPQ s 0.000 0.6300E+05

279 OTHENTCQ s 0.000 0.4204E+05

280 PERSCAPQ s 0.000 1550.

281 PERSCACQ s 0.000 973.3

282 READPQ s 0.000 3304.

283 READCQ s 0.000 1100.

284 EDUCAPQ s 0.000 0.3850E+05

285 EDUCACQ s 0.000 0.3500E+05

286 TOBACCPQ s 0.000 2253.

287 TOBACCCQ s 0.000 2600.

288 MISCPQ s 0.000 0.2305E+05

289 MISCCQ s 0.000 0.1703E+05

290 MISC1PQ s 0.000 0.2305E+05

291 MISC1CQ s 0.000 0.1703E+05

292 MISC2PQ s 0.000 0.000

293 MISC2CQ s 0.000 0.000

294 CASHCOPQ s 0.000 0.8109E+05

295 CASHCOCQ s 0.000 0.2150E+05

296 PERINSPQ s 0.000 0.7000E+05

297 PERINSCQ s 0.000 0.3337E+05

298 LIFINSPQ s 0.000 0.7000E+05

299 LIFINSCQ s 0.000 0.3100E+05

300 RETPENPQ s 0.000 0.2584E+05

301 RETPENCQ s 0.000 0.2298E+05

302 HH\_CU\_Q s 1.000 5.000

303 HH\_CU\_Q\_ m 0

304 HHID c 46 4614

305 HHID\_ m 1

306 POV\_CY c 2 378

307 POV\_CY\_ m 1

308 POV\_PY c 2 378

309 POV\_PY\_ m 1

310 SWIMPOOL c 1 4115

311 SWIM\_OOL m 2

312 APTMENT c 1 4616

313 APTMENT\_ m 2

314 OFSTPARK c 1 1181

315 OFST\_ARK m 2

316 WINDOWAC c 1 4049

317 WIND\_WAC m 2

318 CNTRALAC c 1 1491

319 CNTR\_LAC m 2

320 CHILDAGE s 0.000 7.000

321 CHIL\_AGE m 0

322 INCLASS s 1.000 9.000

323 STATE c 39 492

324 ERANKH s 0.4735E-02 1.000 367

325 ERANKH\_ m 1

326 TOTEX4PQ s 233.2 0.2782E+06

327 TOTEX4CQ s -3759. 0.9669E+05

328 MISCX4PQ s 0.000 0.2305E+05

329 MISCX4CQ s 0.000 0.1703E+05

330 VEHQL s 0.000 4.000

331 VEHQL\_ m 0

332 NUM\_TVAN s 0.000 9.000

333 NUM\_\_VAN m 0

334 TTOTALP s 0.000 0.3821E+05

335 TTOTALC s 0.000 0.2303E+05

336 TFOODTOP s 0.000 5600.

337 TFOODTOC s 0.000 4305.

338 TFOODAWP s 0.000 5500.

339 TFOODAWC s 0.000 4180.

340 TFOODHOP s 0.000 3300.

341 TFOODHOC s 0.000 1050.

342 TALCBEVP s 0.000 2252.

343 TALCBEVC s 0.000 1220.

344 TOTHRLOP s 0.000 0.1013E+05

345 TOTHRLOC s 0.000 7498.

346 TTRANPRP s 0.000 0.2296E+05

347 TTRANPRC s 0.000 0.1198E+05

348 TGASMOTP s 0.000 1750.

349 TGASMOTC s 0.000 2200.

350 TVRENTLP s 0.000 445.0

351 TVRENTLC s 0.000 514.0

352 TCARTRKP s 0.000 0.000

353 TCARTRKC s 0.000 0.000

354 TOTHVHRP s 0.000 0.000

355 TOTHVHRC s 0.000 0.000

356 TOTHTREP s 0.000 445.0

357 TOTHTREC s 0.000 514.0

358 TTRNTRIP s 0.000 0.2287E+05

359 TTRNTRIC s 0.000 0.1198E+05

360 TFAREP s 0.000 0.2202E+05

361 TFAREC s 0.000 0.1126E+05

362 TAIRFARP s 0.000 0.2086E+05

363 TAIRFARC s 0.000 0.1000E+05

364 TOTHFARP s 0.000 9800.

365 TOTHFARC s 0.000 6238.

366 TLOCALTP s 0.000 853.0

367 TLOCALTC s 0.000 1000.

368 TENTRMNP s 0.000 7400.

369 TENTRMNC s 0.000 4131.

370 TFEESADP s 0.000 7400.

371 TFEESADC s 0.000 4131.

372 TOTHENTP s 0.000 1400.

373 TOTHENTC s 0.000 2400.

374 OWNVACP s 0.000 0.2329E+05

375 OWNVACC s 0.000 0.1367E+05

376 VOTHRLOP s 0.000 0.2329E+05

377 VOTHRLOC s 0.000 0.1367E+05

378 VMISCHEP s 0.000 0.000

379 VMISCHEC s 0.000 0.000

380 UTILOWNP s 0.000 2077.

381 UTILOWNC s 0.000 1523.

382 VFUELOIP s 0.000 682.0

383 VFUELOIC s 0.000 625.0

384 VOTHRFLP s 0.000 547.0

385 VOTHRFLC s 0.000 907.0

386 VELECTRP s 0.000 1360.

387 VELECTRC s 0.000 988.0

388 VNATLGAP s 0.000 2077.

389 VNATLGAC s 0.000 201.0

390 VWATERPP s 0.000 475.0

391 VWATERPC s 0.000 571.0

392 MRTPRNOP s 0.000 0.2643E+05

393 MRTPRNOC s 0.000 0.1322E+05

394 UTILRNTP s 0.000 1157.

395 UTILRNTC s 0.000 628.0

396 RFUELOIP s 0.000 565.0

397 RFUELOIC s 0.000 553.0

398 ROTHRFLP s 0.000 0.000

399 ROTHRFLC s 0.000 0.000

400 RELECTRP s 0.000 558.0

401 RELECTRC s 0.000 209.0

402 RNATLGAP s 0.000 254.0

403 RNATLGAC s 0.000 89.00

404 RWATERPP s 0.000 552.0

405 RWATERPC s 0.000 242.0

406 POVLEVCY s 0.1145E+05 0.5184E+05

407 POVL\_VCY m 0

408 POVLEVPY s 0.1122E+05 0.5078E+05

409 POVL\_VPY m 0

410 PORCH c 1 1006

411 PORCH\_ m 2

412 ETOTALP s 233.2 0.2782E+06

413 ETOTALC s -2683. 0.7288E+05

414 ETOTAPX4 s 233.2 0.2782E+06

415 ETOTACX4 s -2683. 0.7288E+05

416 EHOUSNGP s 0.000 0.1811E+06

417 EHOUSNGC s -2196. 0.3897E+05

418 ESHELTRP s 0.000 0.4456E+05

419 ESHELTRC s 0.000 0.3786E+05

420 EOWNDWLP s 0.000 0.4456E+05

421 EOWNDWLC s 0.000 0.3752E+05

422 EOTHLODP s 0.000 0.3342E+05

423 EOTHLODC s 0.000 0.1433E+05

424 EMRTPNOP s 0.000 0.3516E+05

425 EMRTPNOC s 0.000 0.2247E+05

426 EMRTPNVP s 0.000 0.2643E+05

427 EMRTPNVC s 0.000 0.1322E+05

428 ETRANPTP s 0.000 0.8868E+05

429 ETRANPTC s 0.000 0.5436E+05

430 EVEHPURP s 0.000 0.8790E+05

431 EVEHPURC s 0.000 0.5400E+05

432 ECARTKNP s 0.000 0.8790E+05

433 ECARTKNC s 0.000 0.5400E+05

434 ECARTKUP s 0.000 0.2643E+05

435 ECARTKUC s 0.000 0.2662E+05

436 EOTHVEHP s 0.000 0.1166E+05

437 EOTHVEHC s 0.000 6542.

438 EENTRMTP s 0.000 0.6318E+05

439 EENTRMTC s 0.000 0.1605E+05

440 EOTHENTP s 0.000 0.6300E+05

441 EOTHENTC s 0.000 7502.

442 ENOMOTRP s 0.000 7700.

443 ENOMOTRC s 0.000 1500.

444 EMOTRVHP s 0.000 0.6300E+05

445 EMOTRVHC s 0.000 6971.

446 EENTMSCP s 0.000 6000.

447 EENTMSCC s 0.000 5000.

448 EMISCELP s 0.000 0.2305E+05

449 EMISCELC s 0.000 0.1703E+05

450 EMISCMTP s 0.000 1096.

451 EMISCMTC s 0.000 2113.

452 UNISTRQ s 1.000 10.00

453 UNISTRQ\_ m 0

455 WELF\_EBX c 2

456 LUMPSUMB s 2.000 12.00 4684

457 LUMP\_UMB m 2

458 LMPSUMBX s 1200. 0.8000E+05 4684

459 LMPS\_MBX m 2

460 OTHRINCB s 5.000 12.00 4687

461 OTHR\_NCB m 2

462 OTRINCBX s 4693

463 OTRI\_CBX m 1

464 INCLASS2 s 1.000 7.000

465 INCL\_SS2 m 0

467 HORREF1 c 6 4532

468 HORREF1\_ m 1

469 HORREF2 c 5 4577

470 HORREF2\_ m 1

471 ERANKHM s 0.6205E-02 1.000

472 ERANKHM\_ m 0

473 FGOVRETM s 0.000 0.2509E+05

474 FGOV\_ETM m 0

475 FPRIPENM s 0.000 0.5826E+05

476 FPRI\_ENM m 0

477 FRRDEDM s 0.000 0.1043E+05

478 FRRDEDM\_ m 0

479 PSU c 21 2616

480 HISP\_REF c 2

481 HISP2 c 2 1903

482 HIGH\_EDU s 10.00 16.00

483 BUILT s 1915. 2013. 592

484 BUILT\_ m 2

485 CREDFINX s 0.000 6629. 4360

486 CRED\_INX m 2

487 CREDITB s 1.000 5.000 4667

488 CREDITB\_ m 2

489 CREDITBX s 250.0 0.2250E+05 4667

490 CRED\_TBX m 2

491 CREDITX s 1.000 0.5132E+05 4311

492 CREDITX\_ m 2

493 CREDTYRX s 0.000 0.5092E+05 4327

494 CRED\_YRX m 2

495 CREDYRB s 1.000 6.000 4656

496 CREDYRB\_ m 2

497 CREDYRBX s 250.0 0.3500E+05 4656

498 CRED\_RBX m 2

499 DEFBENRP c 2 3551

500 DEFB\_NRP m 2

501 EITC c 2 1042

502 EITC\_ m 2

503 FMLPYYRX s 4.000 4000. 4598

504 FMLP\_YRX m 2

505 FS\_MTHI s 1.000 12.00 4644

506 FS\_MTHI\_ m 1

507 FSMPFRMX s -0.4000E+06 0.1090E+07

508 FSMP\_RMX m 0

514 INTRDVX\_ d 3

522 IRAB s 1.000 6.000 4514

523 IRAB\_ m 2

524 IRABX s 1000. 0.7250E+06 4514

525 IRABX\_ m 2

526 IRAX s 0.000 0.2635E+07 3917

527 IRAX\_ m 2

528 IRAYRB s 1.000 6.000 4489

529 IRAYRB\_ m 2

530 IRAYRBX s 1000. 0.7250E+06 4489

531 IRAYRBX\_ m 2

532 IRAYRX s 0.000 0.2129E+07 3964

533 IRAYRX\_ m 2

534 JFS\_AMT s 0.000 4800.

535 JFS\_AMT\_ m 0

536 LIQDYRBX s 250.0 0.3500E+05 4531

537 LIQD\_RBX m 2

538 LIQUIDBX s 250.0 0.3500E+05 4563

539 LIQU\_DBX m 2

540 LIQUDYRB s 1.000 6.000 4531

541 LIQU\_YRB m 2

542 LIQUDYRX s 0.000 0.5155E+06 3942

543 LIQU\_YRX m 2

544 LIQUIDB s 1.000 6.000 4563

545 LIQUIDB\_ m 2

546 LIQUIDX s 0.000 0.4910E+06 3892

547 LIQUIDX\_ m 2

548 MEALSPAY s 1.000 2.000 9

549 MEAL\_PAY m 2

550 MLPAYWKX s 2.000 300.0 4598

551 MLPA\_WKX m 2

552 MLPYQWKS s 1.000 52.00 4592

553 MLPY\_WKS m 2

554 NETRENTB s 0.000 12.00 4666

555 NETR\_NTB m 3

556 NETRENTX s -0.5499E+05 0.1148E+06 4338

557 NETR\_NTX m 2

558 NETRNTBX s -2400. 0.7130E+05 4666

559 NETR\_TBX m 2

560 OTHASTBX s 0.3000E+05 0.7250E+06 4673

561 OTHA\_TBX m 2

562 OTHASTB s 3.000 6.000 4673

563 OTHASTB\_ m 3

564 OTHASTX s 2.000 0.2767E+07 4648

565 OTHASTX\_ m 2

566 OTHFINX s 0.000 900.0 4654

567 OTHFINX\_ m 2

568 OTHLONBX s 250.0 0.2250E+05 4690

569 OTHL\_NBX m 2

570 OTHLYRBX s 750.0 0.2250E+05 4689

571 OTHL\_RBX m 2

572 OTHLNYRB s 2.000 5.000 4689

573 OTHL\_YRB m 2

574 OTHLNYRX s 0.000 0.5500E+05 4642

575 OTHL\_YRX m 2

576 OTHLOAN s 1.000 2.000 3485

577 OTHLOAN\_ m 1

578 OTHLONB s 1.000 5.000 4690

579 OTHLONB\_ m 2

580 OTHLONX s 1.000 0.3106E+06 4638

581 OTHLONX\_ m 2

582 OTHREGBX s 488.0 0.5000E+05 4678

583 OTHR\_GBX m 2

584 OTHREGB s 1.000 12.00 4678

585 OTHREGB\_ m 2

586 OTHREGX s 36.00 0.6367E+05 4422

587 OTHREGX\_ m 2

588 OTHSYRBX s 6000. 0.7250E+06 4669

589 OTHS\_RBX m 2

590 OTHSTYRB s 2.000 6.000 4669

591 OTHS\_YRB m 2

592 OTHSTYRX s 0.000 0.1533E+07 4656

593 OTHS\_YRX m 2

594 RETSURVX s 30.00 0.1269E+06 3571

595 RETS\_RVX m 2

596 RETSRVBX s 480.0 0.6200E+05 4626

597 RETS\_VBX m 2

598 RETSURV c 3

599 RETSURV\_ m 0

600 RETSURVB s 1.000 12.00 4626

601 RETS\_RVB m 2

604 ROYESTBX s 200.0 0.6000E+05 4654

605 ROYE\_TBX m 2

606 ROYESTB s 1.000 12.00 4654

607 ROYESTB\_ m 2

608 ROYESTX s 1.000 0.1592E+06 4441

609 ROYESTX\_ m 2

610 STCKYRBX s 1000. 0.7250E+06 4613

611 STCK\_RBX m 2

612 STDNTYRB s 3.000 6.000 4675

613 STDN\_YRB m 2

614 STDNTYRX s 0.000 0.4100E+06 4566

615 STDN\_YRX m 2

616 STDTYRBX s 1750. 0.3500E+05 4675

617 STDT\_RBX m 2

618 STOCKYRB s 1.000 6.000 4613

619 STOC\_YRB m 2

620 STOCKYRX s 0.000 0.5784E+07 4420

621 STOC\_YRX m 2

622 STOCKB s 1.000 6.000 4632

623 STOCKB\_ m 3

624 STOCKBX s 1000. 0.7250E+06 4632

625 STOCKBX\_ m 2

626 STOCKX s 25.00 0.6587E+07 4390

627 STOCKX\_ m 2

628 STUDFINX s 0.000 9000. 4595

629 STUD\_INX m 2

630 STUDNTBX s 6250. 0.3500E+05 4682

631 STUD\_TBX m 2

632 STUDNTB s 4.000 6.000 4682

633 STUDNTB\_ m 2

634 STUDNTX s 250.0 0.4200E+06 4556

635 STUDNTX\_ m 2

636 WHLFYRBX s 250.0 0.3500E+05 4648

637 WHLF\_RBX m 2

638 WHLFYRB s 1.000 6.000 4648

639 WHLFYRB\_ m 2

640 WHLFYRX s 0.000 0.7674E+06 4524

641 WHLFYRX\_ m 3

642 WHOLIFBX s 250.0 0.3500E+05 4654

643 WHOL\_FBX m 2

644 WHOLIFB s 1.000 6.000 4654

645 WHOLIFB\_ m 3

646 WHOLIFX s 1.000 0.7892E+06 4508

647 WHOLIFX\_ m 3

648 TOTXEST s -8990. 0.2938E+06

649 FFTAXOWE s -8943. 0.2485E+06

650 FFTA\_OWE m 0

651 FSTAXOWE s -2505. 0.5991E+05

652 FSTA\_OWE m 0

653 ETOTA s 1199. 0.2782E+06

Total #cases w/ #missing

#cases miss. D ord. vals #X-var #N-var #F-var #S-var

4693 0 4693 16 0 0 422

#P-var #M-var #B-var #C-var #I-var

0 171 0 42 0

Number of cases used for training: 4693

Number of split variables: 464

Number of cases excluded due to 0 weight or missing D: 0

Number of trees in ensemble: 500

Number of variables used for splitting: 155

Warning: No linear splits; number of S variables must be < 225

Simple node models

Estimated priors

Unit misclassification costs

Warning: All positive weights treated as 1

Univariate split highest priority

No interaction splits

No linear splits

Fraction of cases used for splitting each node: .0213

Maximum number of split levels: 19

Minimum node sample size: 23

Mean number of terminal nodes: 139.8

Classification matrix for training sample:

Predicted True class

class C D T

C 1284 69 7

D 487 2769 77

T 0 0 0

Total 1771 2838 84

Number of cases used for tree construction: 4693

Number misclassified: 640

Resubstitution estimate of mean misclassification cost: .1364

Number of OOB cases: 4693

Number OOB misclassified: 1047

OOB estimate of mean misclassification cost: .2231

Mean number of trees per OOB observation: 183.96

Predicted class probabilities are stored in gf.prp

Elapsed time in seconds: 1596.3

# Input file for regression forest

GUIDE (do not edit this file unless you know what you are doing)

36.2 (version of GUIDE that generated this file)

1 (1=model fitting, 2=importance or DIF scoring, 3=data conversion)

"gregf.out" (name of output file)

2 (1=one tree, 2=ensemble)

2 (1=bagging, 2=rforest)

2 (1=random splits of missing values, 2=nonrandom)

2 (1=classification, 2=regression)

2 (1=interaction tests, 2=skip them)

"cereg.dsc" (name of data description file)

1 (1=accept default number of trees, 2=change)

1 (1=accept default number of variables for splitting, 2=change it)

1 (1=split point from quantiles, 2=use exhaustive search)

1 (1=accept default splitting fraction, 2=change it)

1 (1=default max. number of split levels, 2=specify no. in next line)

1 (1=default min. node size, 2=specify min. value in next line)

"cereg1.fit" (file name for predicted values)

1. (rank of top variable to split root node)

# Output file for regression forest

GGG U U I DDDD EEEE

G G U U I D D E

G U U I D D E

G GG U U I D D EEE

G G U U I D D E

G G U U I D D E

GGG UUU I DDDD EEEE

GUIDE Classification and Regression Trees and Forests

Version 36.2 (Build date: January 8, 2021)

Compiled with GFortran 10.2.0 on macOS Big Sur 11.1

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This software is based upon work supported by the U.S. Army Research Office,

the National Science Foundation and the National Institutes of Health.

This job was started on 03/10/21 at 20:59

Random forest of GUIDE least-squares regression trees

No pruning

Data description file: cereg.dsc

Training sample file: cedata.txt

Missing value code: NA

Records in data file start on line 2

Number of M variables associated with C variables: 33

409 N variables changed to S

D variable is INTRDVX

Piecewise constant model

Number of records in data file: 4693

Length of longest entry in data file: 11

Missing values found in D variable

Missing values found among categorical variables

Separate categories will be created for missing categorical variables

Missing values found among non-categorical variables

Warning: S variable OTHRINCB is constant

Warning: S variable NETRENTB is constant

Warning: S variable NETRNTBX is constant

Warning: S variable OTHLONBX is constant

Warning: S variable OTHLONB is constant

Smallest and largest positive weights are 1.3507E+03 and 7.0269E+04

Summary information for training sample of size 2922 (excluding observations with

non-positive weight or missing values in d, e, t, r or z variables)

d=dependent, b=split and fit cat variable using indicator variables,

c=split-only categorical, i=fit-only categorical (via indicators),

s=split-only numerical, n=split and fit numerical, f=fit-only numerical,

m=missing-value flag variable, p=periodic variable, w=weight

Levels of M variables are for missing values in associated variables

#Codes/

Levels/

Column Name Minimum Maximum Periods #Missing

1 DIRACC c 2 116

2 DIRACC\_ m 1

3 AGE\_REF s 18.00 87.00

4 AGE\_REF\_ m 0

5 AGE2 s 22.00 87.00 1225

6 AGE2\_ m 1

7 AS\_COMP1 s 0.000 4.000

8 AS\_C\_MP1 m 0

9 AS\_COMP2 s 0.000 4.000

10 AS\_C\_MP2 m 0

11 AS\_COMP3 s 0.000 4.000

12 AS\_C\_MP3 m 0

13 AS\_COMP4 s 0.000 3.000

14 AS\_C\_MP4 m 0

15 AS\_COMP5 s 0.000 2.000

16 AS\_C\_MP5 m 0

17 BATHRMQ s 1.000 8.000 10

18 BATHRMQ\_ m 2

19 BEDROOMQ s 0.000 9.000 10

20 BEDR\_OMQ m 2

21 BLS\_URBN s 1.000 2.000

22 BUILDING c 11

23 BUIL\_ING m 0

24 CUTENURE c 6

25 CUTE\_URE m 0

26 EARNCOMP c 9

27 EARN\_OMP m 0

28 EDUC\_REF s 10.00 16.00

29 EDUC0REF m 0

30 EDUCA2 s 10.00 16.00 1225

31 EDUCA2\_ m 1

32 FAM\_SIZE s 1.000 9.000

33 FAM\_\_IZE m 0

34 FAM\_TYPE c 10

35 FAM\_\_YPE m 0

36 FAMTFEDX s 0.000 0.9928E+05

37 FAMT\_EDX m 0

38 FEDRFNDX s 4.000 0.1428E+05 1415

39 FEDR\_NDX m 2

40 FEDTAXX s 2.000 0.8223E+05 2282

41 FEDTAXX\_ m 2

42 FGOVRETX s 0.000 0.2469E+05

43 FGOV\_ETX m 0

44 FINCATAX s -0.3380E+06 0.1410E+07

45 FINCAT\_X m 0

46 FINCBTAX s -0.3430E+06 0.1410E+07

47 FINCBT\_X m 0

48 FINDRETX s 0.000 0.1272E+06

49 FIND\_ETX m 0

50 FINLWT21 w 1351. 0.7027E+05

51 FJSSDEDX s 0.000 0.3042E+05

52 FJSS\_EDX m 0

53 FPRIPENX s 0.000 0.4589E+05

54 FPRI\_ENX m 0

55 FRRDEDX s 0.000 9980.

56 FRRDEDX\_ m 0

57 FRRETIRX s 0.000 0.5241E+05

58 FRRE\_IRX m 0

59 FSALARYX s 0.000 0.5301E+06

60 FSAL\_RYX m 0

61 FSLTAXX s 0.000 0.3010E+05

62 FSLTAXX\_ m 0

63 FSSIX s 0.000 0.3048E+05

64 FSSIX\_ m 0

65 HLFBATHQ s 0.000 3.000 12

66 HLFB\_THQ m 2

67 INC\_HRS1 s 1.000 93.00 1016

68 INC\_\_RS1 m 1

69 INC\_HRS2 s 1.000 84.00 1773

70 INC\_\_RS2 m 1

71 INC\_RANK s 0.1000E-03 1.000 64

72 INC\_\_ANK m 1

73 INCNONW1 c 6 1906

74 INCN\_NW1 m 1

75 INCNONW2 c 6 2374

76 INCN\_NW2 m 1

77 INCOMEY1 c 6 1016

78 INCO\_EY1 m 1

79 INCOMEY2 c 6 1773

80 INCO\_EY2 m 1

81 INCWEEK1 s 0.000 52.00

82 INCW\_EK1 m 0

83 INCWEEK2 s 0.000 52.00 1225

84 INCW\_EK2 m 1

85 MISCTAXX s 5.000 0.2524E+05 2855

86 MISC\_AXX m 1

87 LUMPSUMX s 4.000 0.5492E+06 2735

88 LUMP\_UMX m 2

89 MARITAL1 c 6

90 MARI\_AL1 m 0

91 NO\_EARNR s 0.000 6.000

92 NO\_E\_RNR m 0

93 NONINCMX s 0.000 0.5492E+06

94 NONI\_CMX m 0

95 NUM\_AUTO s 0.000 7.000

96 NUM\_\_UTO m 0

97 OCCUCOD1 c 15 1016

98 OCCU\_OD1 m 1

99 OCCUCOD2 c 15 1773

100 OCCU\_OD2 m 1

101 OTHRINCX s 2.000 0.5788E+05 2822

102 OTHR\_NCX m 2

103 PERSLT18 s 0.000 7.000

104 PERS\_T18 m 0

105 PERSOT64 s 0.000 3.000

106 PERS\_T64 m 0

107 POPSIZE s 1.000 5.000 27

108 PRINEARN c 8

109 PRIN\_ARN m 0

110 QINTRVMO c 12

111 QINTRVYR c 2

112 RACE2 c 6 1225

113 RACE2\_ m 1

114 REF\_RACE c 7

115 REF\_\_ACE m 0

116 REGION c 4 27

117 RENTEQVX s 1.000 4694. 451

118 RENT\_QVX m 1

119 RESPSTAT c 3

120 RESP\_TAT m 0

121 ROOMSQ s 1.000 19.00 12

122 ROOMSQ\_ m 2

123 SEX\_REF c 3

124 SEX\_REF\_ m 0

125 SEX2 c 2 1225

126 SEX2\_ m 1

127 SLOCTAXX s 1.000 0.2657E+05 2441

128 SLOC\_AXX m 2

129 SLRFUNDX s 1.000 4169. 1859

130 SLRF\_NDX m 2

131 SMSASTAT c 2

132 ST\_HOUS c 3

133 ST\_HOUS\_ m 0

134 TOTTXPDX s -0.1845E+05 0.1467E+06

135 TOTT\_PDX m 0

136 VEHQ s 0.000 17.00

137 VEHQ\_ m 0

138 WELFAREX s 300.0 4344. 2909

139 WELF\_REX m 2

140 TOTEXPPQ s 233.2 0.2782E+06

141 TOTEXPCQ s 0.000 0.8056E+05

142 FOODPQ s 0.000 0.2358E+05

143 FOODCQ s 0.000 7363.

144 FDHOMEPQ s 0.000 8450.

145 FDHOMECQ s 0.000 6067.

146 FDAWAYPQ s 0.000 0.2098E+05

147 FDAWAYCQ s 0.000 5660.

148 FDXMAPPQ s 0.000 0.2098E+05

149 FDXMAPCQ s 0.000 5660.

150 FDMAPPQ s 0.000 780.0

151 FDMAPCQ s 0.000 666.7

152 ALCBEVPQ s 0.000 3152.

153 ALCBEVCQ s 0.000 2550.

154 HOUSPQ s 0.000 0.1811E+06

155 HOUSCQ s 0.000 0.2794E+05

156 SHELTPQ s 0.000 0.4074E+05

157 SHELTCQ s 0.000 0.2547E+05

158 OWNDWEPQ s 0.000 0.3070E+05

159 OWNDWECQ s 0.000 0.2507E+05

160 MRTINTPQ s 0.000 0.2531E+05

161 MRTINTCQ s 0.000 9450.

162 PROPTXPQ s 0.000 4870.

163 PROPTXCQ s 0.000 4247.

164 MRPINSPQ s 0.000 0.2110E+05

165 MRPINSCQ s 0.000 0.2373E+05

166 RENDWEPQ s 0.000 8546.

167 RENDWECQ s 0.000 6742.

168 RNTXRPPQ s 0.000 8546.

169 RNTXRPCQ s 0.000 6742.

170 RNTAPYPQ s 0.000 2922.

171 RNTAPYCQ s 0.000 1433.

172 OTHLODPQ s 0.000 0.3342E+05

173 OTHLODCQ s 0.000 0.1367E+05

174 UTILPQ s 0.000 7581.

175 UTILCQ s 0.000 3921.

176 NTLGASPQ s 0.000 2306.

177 NTLGASCQ s 0.000 885.0

178 ELCTRCPQ s 0.000 4473.

179 ELCTRCCQ s 0.000 2200.

180 ALLFULPQ s 0.000 2752.

181 ALLFULCQ s 0.000 3081.

182 FULOILPQ s 0.000 2752.

183 FULOILCQ s 0.000 3081.

184 OTHFLSPQ s 0.000 1813.

185 OTHFLSCQ s 0.000 2269.

186 TELEPHPQ s 0.000 1638.

187 TELEPHCQ s 0.000 1497.

188 WATRPSPQ s 0.000 1880.

189 WATRPSCQ s 0.000 1035.

190 HOUSOPPQ s 0.000 0.2493E+05

191 HOUSOPCQ s 0.000 8380.

192 DOMSRVPQ s 0.000 0.1620E+05

193 DOMSRVCQ s 0.000 8192.

194 DMSXCCPQ s 0.000 0.1062E+05

195 DMSXCCCQ s 0.000 7150.

196 BBYDAYPQ s 0.000 0.1500E+05

197 BBYDAYCQ s 0.000 7600.

198 OTHHEXPQ s 0.000 0.2493E+05

199 OTHHEXCQ s 0.000 5349.

200 HOUSEQPQ s 0.000 0.1544E+06

201 HOUSEQCQ s 0.000 0.2268E+05

202 TEXTILPQ s 0.000 4000.

203 TEXTILCQ s 0.000 2946.

204 FURNTRPQ s 0.000 0.7500E+05

205 FURNTRCQ s 0.000 0.1811E+05

206 FLRCVRPQ s 0.000 0.1000E+05

207 FLRCVRCQ s 0.000 2500.

208 MAJAPPPQ s 0.000 4657.

209 MAJAPPCQ s 0.000 5500.

210 SMLAPPPQ s 0.000 1000.

211 SMLAPPCQ s 0.000 944.0

212 MISCEQPQ s 0.000 0.6510E+05

213 MISCEQCQ s 0.000 7155.

214 APPARPQ s 0.000 0.2118E+05

215 APPARCQ s 0.000 4604.

216 MENBOYPQ s 0.000 4200.

217 MENBOYCQ s 0.000 1754.

218 MENSIXPQ s 0.000 4200.

219 MENSIXCQ s 0.000 1754.

220 BOYFIFPQ s 0.000 460.0

221 BOYFIFCQ s 0.000 322.0

222 WOMGRLPQ s 0.000 3181.

223 WOMGRLCQ s 0.000 1174.

224 WOMSIXPQ s 0.000 3181.

225 WOMSIXCQ s 0.000 1174.

226 GRLFIFPQ s 0.000 1056.

227 GRLFIFCQ s 0.000 856.0

228 CHLDRNPQ s 0.000 717.0

229 CHLDRNCQ s 0.000 961.0

230 FOOTWRPQ s 0.000 1903.

231 FOOTWRCQ s 0.000 900.0

232 OTHAPLPQ s 0.000 0.2048E+05

233 OTHAPLCQ s 0.000 4076.

234 TRANSPQ s 0.000 0.8778E+05

235 TRANSCQ s 0.000 0.5436E+05

236 CARTKNPQ s 0.000 0.8700E+05

237 CARTKNCQ s 0.000 0.5400E+05

238 CARTKUPQ s 0.000 0.3770E+05

239 CARTKUCQ s 0.000 0.3300E+05

240 OTHVEHPQ s 0.000 0.1417E+05

241 OTHVEHCQ s 0.000 2700.

242 GASMOPQ s 0.000 4832.

243 GASMOCQ s 0.000 3770.

244 VEHFINPQ s 0.000 1044.

245 VEHFINCQ s 0.000 716.0

246 MAINRPPQ s 0.000 4984.

247 MAINRPCQ s 0.000 8060.

248 VEHINSPQ s 0.000 3944.

249 VEHINSCQ s 0.000 3167.

250 VRNTLOPQ s 0.000 0.1301E+05

251 VRNTLOCQ s 0.000 6512.

252 PUBTRAPQ s 0.000 0.2074E+05

253 PUBTRACQ s 0.000 0.1047E+05

254 TRNTRPPQ s 0.000 0.2067E+05

255 TRNTRPCQ s 0.000 0.1042E+05

256 TRNOTHPQ s 0.000 1448.

257 TRNOTHCQ s 0.000 1140.

258 HEALTHPQ s -100.0 0.1538E+05

259 HEALTHCQ s -941.7 7982.

260 HLTHINPQ s 0.000 0.1221E+05

261 HLTHINCQ s 0.000 6175.

262 MEDSRVPQ s -475.0 0.1198E+05

263 MEDSRVCQ s -1180. 7982.

264 PREDRGPQ s -100.0 2000.

265 PREDRGCQ s -260.0 2200.

266 MEDSUPPQ s -300.0 7000.

267 MEDSUPCQ s -449.0 5310.

268 ENTERTPQ s 0.000 0.6318E+05

269 ENTERTCQ s 0.000 8790.

270 FEEADMPQ s 0.000 8844.

271 FEEADMCQ s 0.000 8354.

272 TVRDIOPQ s 0.000 7007.

273 TVRDIOCQ s 0.000 5143.

274 OTHEQPPQ s 0.000 0.6300E+05

275 OTHEQPCQ s 0.000 7154.

276 PETTOYPQ s 0.000 4425.

277 PETTOYCQ s 0.000 5657.

278 OTHENTPQ s 0.000 0.6300E+05

279 OTHENTCQ s 0.000 7154.

280 PERSCAPQ s 0.000 1018.

281 PERSCACQ s 0.000 800.0

282 READPQ s 0.000 3304.

283 READCQ s 0.000 606.0

284 EDUCAPQ s 0.000 0.3500E+05

285 EDUCACQ s 0.000 0.3500E+05

286 TOBACCPQ s 0.000 2253.

287 TOBACCCQ s 0.000 2600.

288 MISCPQ s 0.000 0.2000E+05

289 MISCCQ s 0.000 0.1703E+05

290 MISC1PQ s 0.000 0.2000E+05

291 MISC1CQ s 0.000 0.1703E+05

294 CASHCOPQ s 0.000 0.8109E+05

295 CASHCOCQ s 0.000 0.1600E+05

296 PERINSPQ s 0.000 0.2589E+05

297 PERINSCQ s 0.000 0.2298E+05

298 LIFINSPQ s 0.000 7085.

299 LIFINSCQ s 0.000 5842.

300 RETPENPQ s 0.000 0.2584E+05

301 RETPENCQ s 0.000 0.2298E+05

302 HH\_CU\_Q s 1.000 5.000

303 HH\_CU\_Q\_ m 0

304 HHID c 46 2855

305 HHID\_ m 1

306 POV\_CY c 2 73

307 POV\_CY\_ m 1

308 POV\_PY c 2 73

309 POV\_PY\_ m 1

310 SWIMPOOL c 1 2546

311 SWIM\_OOL m 2

312 APTMENT c 1 2874

313 APTMENT\_ m 2

314 OFSTPARK c 1 782

315 OFST\_ARK m 2

316 WINDOWAC c 1 2546

317 WIND\_WAC m 2

318 CNTRALAC c 1 934

319 CNTR\_LAC m 2

320 CHILDAGE s 0.000 7.000

321 CHIL\_AGE m 0

322 INCLASS s 1.000 9.000

323 STATE c 39 322

324 ERANKH s 0.6848E-02 1.000 64

325 ERANKH\_ m 1

326 TOTEX4PQ s 233.2 0.2782E+06

327 TOTEX4CQ s 0.000 0.8056E+05

328 MISCX4PQ s 0.000 0.2000E+05

329 MISCX4CQ s 0.000 0.1703E+05

330 VEHQL s 0.000 4.000

331 VEHQL\_ m 0

332 NUM\_TVAN s 0.000 9.000

333 NUM\_\_VAN m 0

334 TTOTALP s 0.000 0.3821E+05

335 TTOTALC s 0.000 0.2303E+05

336 TFOODTOP s 0.000 5500.

337 TFOODTOC s 0.000 4305.

338 TFOODAWP s 0.000 5500.

339 TFOODAWC s 0.000 4180.

340 TFOODHOP s 0.000 3300.

341 TFOODHOC s 0.000 1050.

342 TALCBEVP s 0.000 2252.

343 TALCBEVC s 0.000 1220.

344 TOTHRLOP s 0.000 0.1013E+05

345 TOTHRLOC s 0.000 7498.

346 TTRANPRP s 0.000 0.2101E+05

347 TTRANPRC s 0.000 0.1086E+05

348 TGASMOTP s 0.000 1750.

349 TGASMOTC s 0.000 1540.

350 TVRENTLP s 0.000 445.0

351 TVRENTLC s 0.000 514.0

356 TOTHTREP s 0.000 445.0

357 TOTHTREC s 0.000 514.0

358 TTRNTRIP s 0.000 0.2067E+05

359 TTRNTRIC s 0.000 0.1042E+05

360 TFAREP s 0.000 0.2046E+05

361 TFAREC s 0.000 0.1030E+05

362 TAIRFARP s 0.000 0.2000E+05

363 TAIRFARC s 0.000 0.1000E+05

364 TOTHFARP s 0.000 9800.

365 TOTHFARC s 0.000 3521.

366 TLOCALTP s 0.000 728.0

367 TLOCALTC s 0.000 1000.

368 TENTRMNP s 0.000 7400.

369 TENTRMNC s 0.000 3000.

370 TFEESADP s 0.000 7400.

371 TFEESADC s 0.000 3000.

372 TOTHENTP s 0.000 1400.

373 TOTHENTC s 0.000 2400.

374 OWNVACP s 0.000 0.2329E+05

375 OWNVACC s 0.000 0.1367E+05

376 VOTHRLOP s 0.000 0.2329E+05

377 VOTHRLOC s 0.000 0.1367E+05

380 UTILOWNP s 0.000 2077.

381 UTILOWNC s 0.000 943.0

382 VFUELOIP s 0.000 682.0

383 VFUELOIC s 0.000 625.0

384 VOTHRFLP s 0.000 547.0

385 VOTHRFLC s 0.000 907.0

386 VELECTRP s 0.000 1360.

387 VELECTRC s 0.000 489.0

388 VNATLGAP s 0.000 2077.

389 VNATLGAC s 0.000 177.0

390 VWATERPP s 0.000 429.0

391 VWATERPC s 0.000 571.0

392 MRTPRNOP s 0.000 0.2643E+05

393 MRTPRNOC s 0.000 0.1322E+05

394 UTILRNTP s 0.000 1157.

395 UTILRNTC s 0.000 628.0

396 RFUELOIP s 0.000 565.0

397 RFUELOIC s 0.000 553.0

400 RELECTRP s 0.000 558.0

401 RELECTRC s 0.000 209.0

402 RNATLGAP s 0.000 254.0

403 RNATLGAC s 0.000 59.00

404 RWATERPP s 0.000 552.0

405 RWATERPC s 0.000 242.0

406 POVLEVCY s 0.1145E+05 0.5087E+05

407 POVL\_VCY m 0

408 POVLEVPY s 0.1122E+05 0.4982E+05

409 POVL\_VPY m 0

410 PORCH c 1 624

411 PORCH\_ m 2

412 ETOTALP s 233.2 0.2782E+06

413 ETOTALC s 0.000 0.6995E+05

414 ETOTAPX4 s 233.2 0.2782E+06

415 ETOTACX4 s 0.000 0.6995E+05

416 EHOUSNGP s 0.000 0.1811E+06

417 EHOUSNGC s 0.000 0.3303E+05

418 ESHELTRP s 0.000 0.4456E+05

419 ESHELTRC s 0.000 0.2724E+05

420 EOWNDWLP s 0.000 0.4456E+05

421 EOWNDWLC s 0.000 0.2613E+05

422 EOTHLODP s 0.000 0.3342E+05

423 EOTHLODC s 0.000 0.1433E+05

424 EMRTPNOP s 0.000 0.3516E+05

425 EMRTPNOC s 0.000 0.2247E+05

426 EMRTPNVP s 0.000 0.2643E+05

427 EMRTPNVC s 0.000 0.1322E+05

428 ETRANPTP s 0.000 0.8868E+05

429 ETRANPTC s 0.000 0.5436E+05

430 EVEHPURP s 0.000 0.8790E+05

431 EVEHPURC s 0.000 0.5400E+05

432 ECARTKNP s 0.000 0.8790E+05

433 ECARTKNC s 0.000 0.5400E+05

434 ECARTKUP s 0.000 0.2643E+05

435 ECARTKUC s 0.000 0.2662E+05

436 EOTHVEHP s 0.000 0.1166E+05

437 EOTHVEHC s 0.000 2700.

438 EENTRMTP s 0.000 0.6318E+05

439 EENTRMTC s 0.000 8790.

440 EOTHENTP s 0.000 0.6300E+05

441 EOTHENTC s 0.000 7154.

442 ENOMOTRP s 0.000 7700.

443 ENOMOTRC s 0.000 696.0

444 EMOTRVHP s 0.000 0.6300E+05

445 EMOTRVHC s 0.000 6971.

446 EENTMSCP s 0.000 3750.

447 EENTMSCC s 0.000 5000.

448 EMISCELP s 0.000 0.2000E+05

449 EMISCELC s 0.000 0.1703E+05

450 EMISCMTP s 0.000 1048.

451 EMISCMTC s 0.000 2113.

452 UNISTRQ s 1.000 10.00

453 UNISTRQ\_ m 0

455 WELF\_EBX c 2

457 LUMP\_UMB c 3

459 LMPS\_MBX c 3

460 OTHRINCB s 5.000 5.000 2921

461 OTHR\_NCB m 1

464 INCLASS2 s 1.000 7.000

465 INCL\_SS2 m 0

467 HORREF1 c 6 2800

468 HORREF1\_ m 1

469 HORREF2 c 5 2840

470 HORREF2\_ m 1

471 ERANKHM s 0.7504E-02 1.000

472 ERANKHM\_ m 0

473 FGOVRETM s 0.000 0.2509E+05

474 FGOV\_ETM m 0

475 FPRIPENM s 0.000 0.4551E+05

476 FPRI\_ENM m 0

477 FRRDEDM s 0.000 0.1043E+05

478 FRRDEDM\_ m 0

479 PSU c 21 1659

480 HISP\_REF c 2

481 HISP2 c 2 1225

482 HIGH\_EDU s 10.00 16.00

483 BUILT s 1915. 2012. 363

484 BUILT\_ m 2

485 CREDFINX s 0.000 6629. 2665

486 CRED\_INX m 2

487 CREDITB s 1.000 5.000 2914

488 CREDITB\_ m 2

489 CREDITBX s 250.0 0.2250E+05 2914

490 CRED\_TBX m 2

491 CREDITX s 1.000 0.5132E+05 2628

492 CREDITX\_ m 2

493 CREDTYRX s 0.000 0.5092E+05 2639

494 CRED\_YRX m 2

495 CREDYRB s 1.000 6.000 2904

496 CREDYRB\_ m 2

497 CREDYRBX s 250.0 0.3500E+05 2904

498 CRED\_RBX m 2

499 DEFBENRP c 2 2169

500 DEFB\_NRP m 2

501 EITC c 2 598

502 EITC\_ m 2

503 FMLPYYRX s 4.000 4000. 2844

504 FMLP\_YRX m 2

505 FS\_MTHI s 1.000 12.00 2893

506 FS\_MTHI\_ m 1

507 FSMPFRMX s -0.4000E+06 0.1090E+07

508 FSMP\_RMX m 0

513 INTRDVX d 1.000 0.9834E+05

522 IRAB s 1.000 6.000 2826

523 IRAB\_ m 2

524 IRABX s 1000. 0.7250E+06 2826

525 IRABX\_ m 2

526 IRAX s 0.000 0.2635E+07 2309

527 IRAX\_ m 2

528 IRAYRB s 1.000 6.000 2804

529 IRAYRB\_ m 2

530 IRAYRBX s 1000. 0.7250E+06 2804

531 IRAYRBX\_ m 2

532 IRAYRX s 0.000 0.2129E+07 2344

533 IRAYRX\_ m 2

534 JFS\_AMT s 0.000 4800.

535 JFS\_AMT\_ m 0

536 LIQDYRBX s 250.0 0.3500E+05 2839

537 LIQD\_RBX m 2

538 LIQUIDBX s 250.0 0.3500E+05 2861

539 LIQU\_DBX m 2

540 LIQUDYRB s 1.000 6.000 2839

541 LIQU\_YRB m 2

542 LIQUDYRX s 0.000 0.5155E+06 2320

543 LIQU\_YRX m 2

544 LIQUIDB s 1.000 6.000 2861

545 LIQUIDB\_ m 2

546 LIQUIDX s 0.000 0.4910E+06 2289

547 LIQUIDX\_ m 2

548 MEALSPAY s 1.000 2.000 2

549 MEAL\_PAY m 1

550 MLPAYWKX s 2.000 120.0 2844

551 MLPA\_WKX m 2

552 MLPYQWKS s 1.000 52.00 2841

553 MLPY\_WKS m 1

554 NETRENTB s 0.000 0.000 2920

555 NETR\_NTB m 2

556 NETRENTX s -0.5499E+05 0.1148E+06 2650

557 NETR\_NTX m 2

558 NETRNTBX s -2400. -2400. 2920

559 NETR\_TBX m 2

560 OTHASTBX s 0.3000E+05 0.7250E+06 2909

561 OTHA\_TBX m 2

562 OTHASTB s 3.000 6.000 2909

563 OTHASTB\_ m 3

564 OTHASTX s 2.000 0.6000E+06 2889

565 OTHASTX\_ m 2

566 OTHFINX s 0.000 900.0 2889

567 OTHFINX\_ m 2

568 OTHLONBX s 250.0 250.0 2921

569 OTHL\_NBX m 2

570 OTHLYRBX s 750.0 0.2250E+05 2920

571 OTHL\_RBX m 2

572 OTHLNYRB s 2.000 5.000 2920

573 OTHL\_YRB m 2

574 OTHLNYRX s 0.000 0.5500E+05 2880

575 OTHL\_YRX m 2

576 OTHLOAN s 1.000 2.000 2150

577 OTHLOAN\_ m 1

578 OTHLONB s 1.000 1.000 2921

579 OTHLONB\_ m 2

580 OTHLONX s 1.000 0.3106E+06 2877

581 OTHLONX\_ m 2

582 OTHREGBX s 488.0 0.5000E+05 2913

583 OTHR\_GBX m 2

584 OTHREGB s 1.000 12.00 2913

585 OTHREGB\_ m 2

586 OTHREGX s 100.0 0.6367E+05 2725

587 OTHREGX\_ m 2

588 OTHSYRBX s 6000. 0.7250E+06 2908

589 OTHS\_RBX m 2

590 OTHSTYRB s 2.000 6.000 2908

591 OTHS\_YRB m 2

592 OTHSTYRX s 0.000 0.1533E+07 2894

593 OTHS\_YRX m 2

594 RETSURVX s 30.00 0.1269E+06 2127

595 RETS\_RVX m 2

596 RETSRVBX s 480.0 0.6200E+05 2913

597 RETS\_VBX m 2

598 RETSURV c 3

599 RETSURV\_ m 0

600 RETSURVB s 1.000 12.00 2913

601 RETS\_RVB m 2

604 ROYESTBX s 1300. 6000. 2916

605 ROYE\_TBX m 2

606 ROYESTB s 2.000 6.000 2916

607 ROYESTB\_ m 2

608 ROYESTX s 1.000 0.1592E+06 2730

609 ROYESTX\_ m 2

610 STCKYRBX s 1000. 0.7250E+06 2874

611 STCK\_RBX m 2

612 STDNTYRB s 4.000 6.000 2913

613 STDN\_YRB m 2

614 STDNTYRX s 0.000 0.4100E+06 2821

615 STDN\_YRX m 2

616 STDTYRBX s 6250. 0.3500E+05 2913

617 STDT\_RBX m 2

618 STOCKYRB s 1.000 6.000 2874

619 STOC\_YRB m 2

620 STOCKYRX s 0.000 0.5784E+07 2703

621 STOC\_YRX m 2

622 STOCKB s 1.000 6.000 2887

623 STOCKB\_ m 3

624 STOCKBX s 1000. 0.7250E+06 2887

625 STOCKBX\_ m 2

626 STOCKX s 25.00 0.6587E+07 2683

627 STOCKX\_ m 2

628 STUDFINX s 0.000 9000. 2847

629 STUD\_INX m 2

630 STUDNTBX s 6250. 0.3500E+05 2917

631 STUD\_TBX m 2

632 STUDNTB s 4.000 6.000 2917

633 STUDNTB\_ m 2

634 STUDNTX s 250.0 0.4200E+06 2815

635 STUDNTX\_ m 2

636 WHLFYRBX s 250.0 0.3500E+05 2895

637 WHLF\_RBX m 2

638 WHLFYRB s 1.000 6.000 2895

639 WHLFYRB\_ m 2

640 WHLFYRX s 0.000 0.7674E+06 2786

641 WHLFYRX\_ m 3

642 WHOLIFBX s 250.0 0.3500E+05 2895

643 WHOL\_FBX m 2

644 WHOLIFB s 1.000 6.000 2895

645 WHOLIFB\_ m 2

646 WHOLIFX s 1.000 0.7892E+06 2780

647 WHOLIFX\_ m 3

648 TOTXEST s -8990. 0.2938E+06

649 FFTAXOWE s -8943. 0.2485E+06

650 FFTA\_OWE m 0

651 FSTAXOWE s -2505. 0.5991E+05

652 FSTA\_OWE m 0

653 ETOTA s 1199. 0.2782E+06

Total #cases w/ #missing

#cases miss. D ord. vals #X-var #N-var #F-var #S-var

4693 1771 4693 30 0 0 409

#P-var #M-var #B-var #C-var #I-var

0 168 0 44 0

Weight variable FINLWT21 in column: 50

Number of cases used for training: 2922

Number of split variables: 453

Number of cases excluded due to 0 weight or missing D: 1771

Number of trees in ensemble: 500

Number of variables used for splitting: 152

No nodewise interaction tests

Fraction of cases used for splitting each node: .0342

Maximum number of split levels: 17

Minimum node sample size: 14

Mean number of terminal nodes: 152.6

Resubstitution estimate of mean squared error: 121481371.7050

based on number of training cases: 2922

Proportion of variance (R-squared) explained by ensemble model: 0.5707

Number of OOB cases: 2922

OOB estimate of mean squared error: 173455792.0092

Mean number of trees per OOB observation: 183.86

Number of test cases with 0 weight and nonmissing responses = 0

Observed and fitted values are stored in cereg1.fit

Elapsed time in seconds: 1373.1

# Input file for Subset

GUIDE (do not edit this file unless you know what you are doing)

36.2 (version of GUIDE that generated this file)

3 (1=model fitting, 2=importance or DIF scoring, 3=data conversion)

"subset.out" (name of output file)

1 (1=D is categorical, 2=D is real)

"ceclass.dsc" (name of data description file)

1 (choice of data format)

"subset.txt" (name of new data file)

# Output file for Subset

GGG U U I DDDD EEEE

G G U U I D D E

G U U I D D E

G GG U U I D D EEE

G G U U I D D E

G G U U I D D E

GGG UUU I DDDD EEEE

GUIDE Classification and Regression Trees and Forests

Version 36.2 (Build date: January 8, 2021)

Compiled with GFortran 10.2.0 on macOS Big Sur 11.1

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the National Science Foundation and the National Institutes of Health.

This job was started on 03/10/21 at 19:03

No pruning

Data description file: ceclass.dsc

Training sample file: cedata.txt

Missing value code: NA

Records in data file start on line 2

Number of M variables associated with C variables: 33

423 N variables changed to S

D variable is INTRDVX\_

Number of records in data file: 4693

Length of longest entry in data file: 11

Missing values found among categorical variables

Separate categories will be created for missing categorical variables

Missing values found among non-categorical variables

Number of classes: 3

Warning: "x" variables will be excluded

Input your choice: 1