A selection of data values generated from Spotify from a range of songs and genres, created during the prototype phase as an initial attempt to create an algorithm that could be used to predict genres. This was created using the file Get Song Features.py, and used by the Compare Genre Features.py file from the first phase of prototyping, but was abandoned after the first phase of prototyping as it didn’t create the desired results when predicting song genre.

## Max Genre Features:

**Dance (434 Songs)**

acousticness 0.749

danceability 0.956

energy 0.992

instrumentalness 0.951

liveness 0.968

loudness -0.493

speechiness 0.752

valence 0.973

tempo 214.175

**Pop (578 Songs)**

acousticness 0.981

danceability 0.965

energy 0.963

instrumentalness 0.219

liveness 0.822

loudness -1.702

speechiness 0.594

valence 0.962

tempo 204.103

**House (558 Songs)**

acousticness 0.794

danceability 0.973

energy 0.992

instrumentalness 0.982

liveness 0.957

loudness -0.671

speechiness 0.605

valence 0.967

tempo 191.994

**Alternative (565 Songs)**

acousticness 0.983

danceability 0.871

energy 0.994

instrumentalness 0.977

liveness 0.883

loudness -1.742

speechiness 0.372

valence 0.974

tempo 205.528

**Country (548 Songs)**

acousticness 0.887

danceability 0.835

energy 0.976

instrumentalness 0.179

liveness 0.948

loudness -0.716

speechiness 0.173

valence 0.982

tempo 208.067

**Classical (451 Songs)**

acousticness 0.996

danceability 0.692

energy 0.858

instrumentalness 0.984

liveness 0.931

loudness -5.271

speechiness 0.575

valence 0.886

tempo 185.654

**Electronic (560 Songs)**

acousticness 0.950

danceability 0.973

energy 0.998

instrumentalness 0.982

liveness 0.980

loudness -0.184

speechiness 0.729

valence 0.977

tempo 220.169

**Folk (549 Songs)**

acousticness 0.994

danceability 0.885

energy 0.998

instrumentalness 0.977

liveness 0.992

loudness -1.814

speechiness 0.383

valence 0.972

tempo 206.431

**Hip-Hop (577 Songs)**

acousticness 0.779

danceability 0.969

energy 0.983

instrumentalness 0.811

liveness 0.918

loudness -0.140

speechiness 0.944

valence 0.961

tempo 207.982

**Rock (568 Songs)**

acousticness 0.904

danceability 0.888

energy 0.996

instrumentalness 0.862

liveness 0.959

loudness -1.654

speechiness 0.304

valence 0.972

tempo 207.639

**Heavy-Metal (494 Songs)**

acousticness 0.276

danceability 0.671

energy 1.000

instrumentalness 0.988

liveness 0.926

loudness -1.350

speechiness 0.318

valence 0.827

tempo 202.777

**Indie (558 Songs)**

acousticness 0.991

danceability 0.956

energy 0.972

instrumentalness 0.976

liveness 0.915

loudness -1.786

speechiness 0.592

valence 0.973

tempo 202.015

**Jazz (467 Songs)**

acousticness 0.996

danceability 0.878

energy 0.951

instrumentalness 0.982

liveness 0.978

loudness -4.663

speechiness 0.373

valence 0.964

tempo 207.423

**Reggae (476 Songs)**

acousticness 0.825

danceability 0.962

energy 0.956

instrumentalness 0.731

liveness 0.911

loudness -2.038

speechiness 0.514

valence 0.978

tempo 200.050

## Mean Genre Features:

**Dance (440 Songs)**

acousticness 0.064615

danceability 0.690191

energy 0.771264

instrumentalness 0.227935

liveness 0.207875

loudness -6.061166

speechiness 0.084969

valence 0.484721

tempo 124.986000

**Pop (569 Songs)**

acousticness 0.172610

danceability 0.670849

energy 0.647137

instrumentalness 0.005831

liveness 0.163970

loudness -6.045596

speechiness 0.106119

valence 0.463200

tempo 119.639380

**House (561 Songs)**

acousticness 0.033990

danceability 0.655829

energy 0.803599

instrumentalness 0.299438

liveness 0.217018

loudness -5.272772

speechiness 0.085577

valence 0.383148

tempo 127.837071

**Alternative (573 Songs)**

acousticness 0.110468

danceability 0.515775

energy 0.760438

instrumentalness 0.075956

liveness 0.181159

loudness -6.085190

speechiness 0.056024

valence 0.487301

tempo 125.169742

**Country (573 Songs)**

acousticness 0.213021

danceability 0.583967

energy 0.677700

instrumentalness 0.000860

liveness 0.165825

loudness -6.684754

speechiness 0.040520

valence 0.558324

tempo 122.667677

**Classical (448 Songs)**

acousticness 0.903893

danceability 0.256894

energy 0.128129

instrumentalness 0.677806

liveness 0.142507

loudness -22.653283

speechiness 0.047548

valence 0.140572

tempo 102.498991

**Electronic (586 Songs)**

acousticness 0.101789

danceability 0.611519

energy 0.759824

instrumentalness 0.342178

liveness 0.226832

loudness -6.560809

speechiness 0.089206

valence 0.411909

tempo 125.506874

**Folk (558 Songs)**

acousticness 0.510035

danceability 0.512219

energy 0.481706

instrumentalness 0.089538

liveness 0.164313

loudness -9.925183

speechiness 0.043307

valence 0.407673

tempo 120.921005

**Hip-Hop (556 Songs)**

acousticness 0.140257

danceability 0.750496

energy 0.634993

instrumentalness 0.006087

liveness 0.200147

loudness -6.674721

speechiness 0.219158

valence 0.493746

tempo 119.595640

**Rock (555 Songs)**

acousticness 0.086070

danceability 0.493512

energy 0.796240

instrumentalness 0.033046

liveness 0.196608

loudness -6.147353

speechiness 0.064567

valence 0.490357

tempo 126.644508

**Heavy-Metal (503 Songs)**

acousticness 0.003927

danceability 0.385843

energy 0.925076

instrumentalness 0.213899

liveness 0.217367

loudness -5.298250

speechiness 0.092741

valence 0.282627

tempo 122.901901

**Indie (569 Songs)**

acousticness 0.292991

danceability 0.547754

energy 0.613923

instrumentalness 0.140447

liveness 0.176069

loudness -8.045353

speechiness 0.055066

valence 0.458860

tempo 118.933761

**Jazz (463 Songs)**

acousticness 0.667269

danceability 0.502749

energy 0.361429

instrumentalness 0.398935

liveness 0.163215

loudness -13.965847

speechiness 0.054067

valence 0.465789

tempo 114.936056

**Reggae (523 Songs)**

acousticness 0.178708

danceability 0.717889

energy 0.638165

instrumentalness 0.008633

liveness 0.160438

loudness -6.900226

speechiness 0.187390

valence 0.732510

tempo 112.213868

## Min Genre Features:

**Dance (437 Songs)**

acousticness 0.000007

danceability 0.321000

energy 0.328000

instrumentalness 0.000000

liveness 0.023800

loudness -14.644000

speechiness 0.025700

valence 0.032700

tempo 75.065000

**Pop (565 Songs)**

acousticness 0.00006

danceability 0.25800

energy 0.05190

instrumentalness 0.00000

liveness 0.02080

loudness -21.10700

speechiness 0.02320

valence 0.03380

tempo 71.91200

**House (558 Songs)**

acousticness 0.000009

danceability 0.270000

energy 0.339000

instrumentalness 0.000000

liveness 0.017000

loudness -14.333000

speechiness 0.025300

valence 0.027900

tempo 70.027000

**Alternative (570 Songs)**

acousticness 0.000003

danceability 0.136000

energy 0.129000

instrumentalness 0.000000

liveness 0.021000

loudness -18.141000

speechiness 0.023800

valence 0.042800

tempo 67.528000

**Country (582 Songs)**

acousticness 0.000159

danceability 0.255000

energy 0.064500

instrumentalness 0.000000

liveness 0.021700

loudness -20.243000

speechiness 0.022700

valence 0.069400

tempo 60.011000

**Classical (460 Songs)**

acousticness 0.15500

danceability 0.00000

energy 0.00106

instrumentalness 0.00000

liveness 0.04020

loudness -41.98600

speechiness 0.00000

valence 0.00000

tempo 0.00000

**Electronic (563 Songs)**

acousticness 0.000006

danceability 0.078700

energy 0.036200

instrumentalness 0.000000

liveness 0.021500

loudness -27.285000

speechiness 0.025300

valence 0.022200

tempo 55.991000

**Folk (554 Songs)**

acousticness 0.000002

danceability 0.149000

energy 0.019300

instrumentalness 0.000000

liveness 0.046400

loudness -22.846000

speechiness 0.023800

valence 0.033300

tempo 52.946000

**Hip-Hop (578 Songs)**

acousticness 0.000107

danceability 0.328000

energy 0.252000

instrumentalness 0.000000

liveness 0.023500

loudness -16.099000

speechiness 0.026100

valence 0.035200

tempo 67.297000

**Rock (570 Songs)**

acousticness 0.000005

danceability 0.146000

energy 0.134000

instrumentalness 0.000000

liveness 0.021000

loudness -18.908000

speechiness 0.024800

valence 0.038400

tempo 71.841000

**Heavy-Metal (501 Songs)**

acousticness 0.0000

danceability 0.0941

energy 0.3970

instrumentalness 0.0000

liveness 0.0255

loudness -15.0900

speechiness 0.0253

valence 0.0215

tempo 67.0360

**Indie (563 Songs)**

acousticness 0.000005

danceability 0.138000

energy 0.025900

instrumentalness 0.000000

liveness 0.028000

loudness -30.016000

speechiness 0.022900

valence 0.035000

tempo 57.107000

**Jazz (469 Songs)**

acousticness 0.000299

danceability 0.000000

energy 0.002110

instrumentalness 0.000000

liveness 0.018500

loudness -28.665000

speechiness 0.000000

valence 0.000000

tempo 0.000000

**Reggae (489 Songs)**

acousticness 0.000256

danceability 0.296000

energy 0.144000

instrumentalness 0.000000

liveness 0.014500

loudness -20.520000

speechiness 0.024300

valence 0.163000

tempo 65.919000

## Standard Deviation of Genre Features:

**Dance (442 Songs)**

acousticness 0.114024

danceability 0.120201

energy 0.133966

instrumentalness 0.324275

liveness 0.191524

loudness 2.167121

speechiness 0.083183

valence 0.220797

tempo 15.399060

**Pop (550 Songs)**

acousticness 0.202963

danceability 0.130709

energy 0.163311

instrumentalness 0.022552

liveness 0.120637

loudness 2.057470

speechiness 0.100213

valence 0.219189

tempo 26.610166

**House (562 Songs)**

acousticness 0.078375

danceability 0.119408

energy 0.136966

instrumentalness 0.359435

liveness 0.182762

loudness 1.933674

speechiness 0.071254

valence 0.219688

tempo 10.572714

**Alternative (572 Songs)**

acousticness 0.197804

danceability 0.136052

energy 0.168477

instrumentalness 0.194398

liveness 0.141505

loudness 2.366998

speechiness 0.041911

valence 0.231230

tempo 27.963380

**Country (562 Songs)**

acousticness 0.206700

danceability 0.096176

energy 0.171739

instrumentalness 0.006395

liveness 0.110368

loudness 2.692016

speechiness 0.019903

valence 0.215166

tempo 30.776953

**Classical (461 Songs)**

acousticness 0.131515

danceability 0.137262

energy 0.127946

instrumentalness 0.312172

liveness 0.124923

loudness 6.433610

speechiness 0.034555

valence 0.171996

tempo 31.831916

**Electronic (562 Songs)**

acousticness 0.198120

danceability 0.148029

energy 0.176799

instrumentalness 0.362109

liveness 0.185881

loudness 3.408051

speechiness 0.087002

valence 0.241481

tempo 22.366633

**Folk (563 Songs)**

acousticness 0.326732

danceability 0.129687

energy 0.229238

instrumentalness 0.227522

liveness 0.133072

loudness 3.936888

speechiness 0.032852

valence 0.224758

tempo 27.580858

**Hip-Hop (592 Songs)**

acousticness 0.168968

danceability 0.122585

energy 0.140492

instrumentalness 0.039965

liveness 0.145469

loudness 2.325424

speechiness 0.125677

valence 0.227327

tempo 30.398290

**Rock (558 Songs)**

acousticness 0.163994

danceability 0.130676

energy 0.172402

instrumentalness 0.112012

liveness 0.156313

loudness 2.939397

speechiness 0.045263

valence 0.212700

tempo 30.170100

**Heavy-Metal (448 Songs)**

acousticness 0.021438

danceability 0.119807

energy 0.084338

instrumentalness 0.306504

liveness 0.164725

loudness 2.045420

speechiness 0.053795

valence 0.170543

tempo 28.299610

**Indie (581 Songs)**

acousticness 0.312757

danceability 0.146340

energy 0.217497

instrumentalness 0.260967

liveness 0.129637

loudness 3.476616

speechiness 0.050939

valence 0.229963

tempo 26.641930

**Jazz (452 Songs)**

acousticness 0.289416

danceability 0.134751

energy 0.220752

instrumentalness 0.383749

liveness 0.148772

loudness 4.547466

speechiness 0.037072

valence 0.245852

tempo 30.424469

**Reggae (478 Songs)**

acousticness 0.167247

danceability 0.104534

energy 0.142852

instrumentalness 0.054441

liveness 0.125975

loudness 2.982669

speechiness 0.114437

valence 0.157830

tempo 33.486003