Work in progress

Feature selection

higher ⇄ lower
Features causing minimizing/maximizing reconstruction error
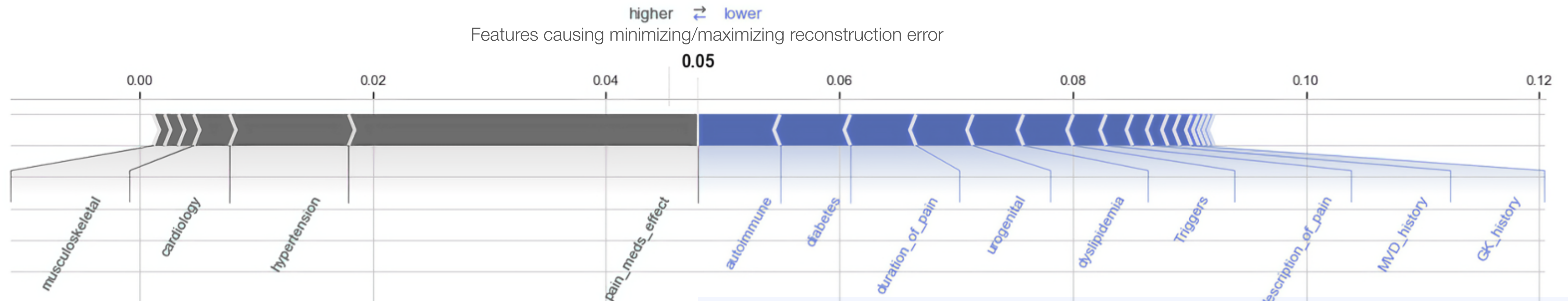
Features dropped: Musculoskeletal comorbidities, cardiological comorbidities, hypertension, pain medication effects, trigeminal deficit, affected branches.

Intuitively, Shapely value reconstruction error model makes sense!

- Trigeminal deficit is difficult to assess objectively. Does not capture effects of individual deficits.

- Degree of medication relief is subjective; compliance and consistency is difficult to control for.

- Heart-related comorbidities is a multi-factorial variable

- MSK comorbidities pathogenesis and etiology is most likely independent of TN.
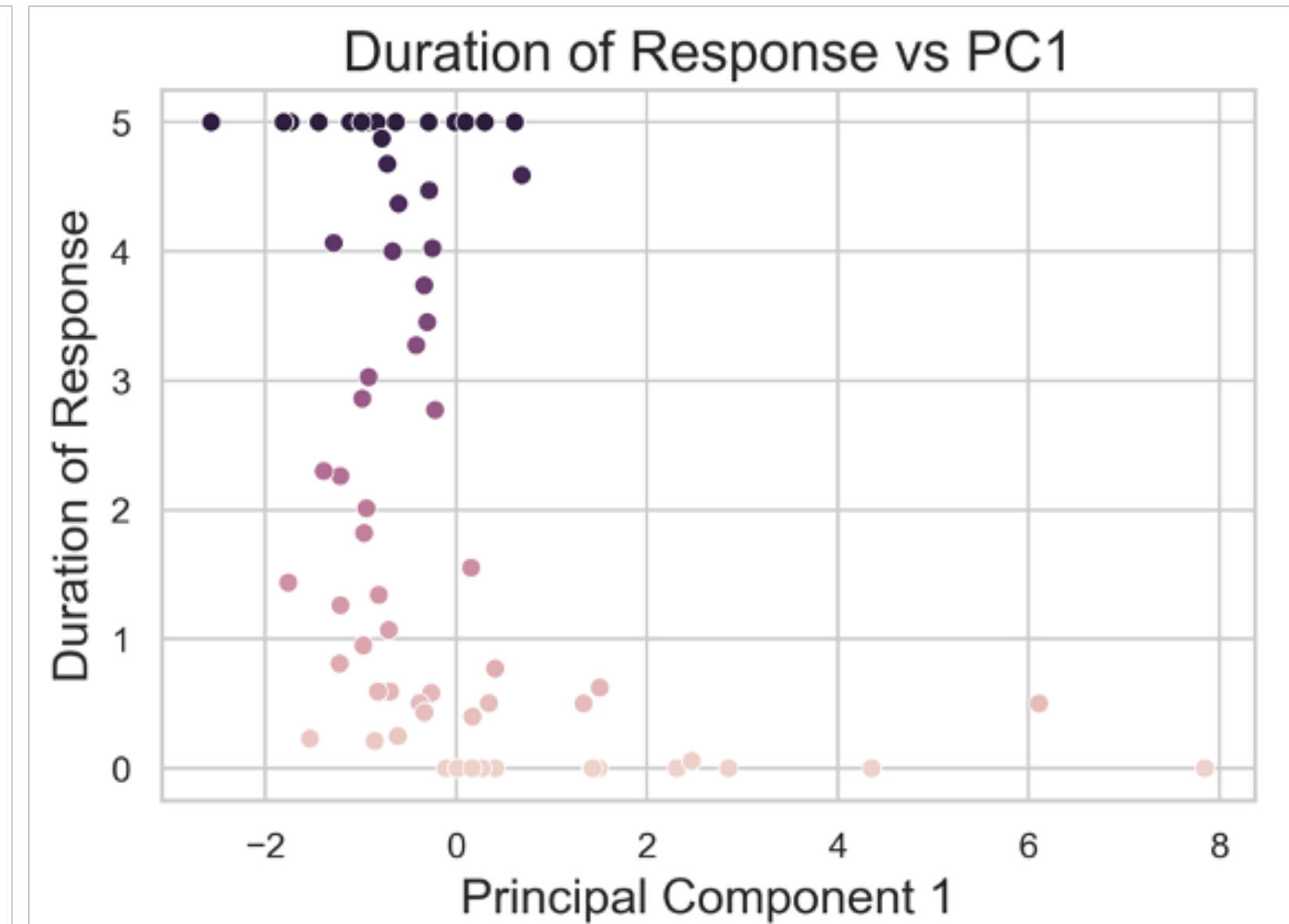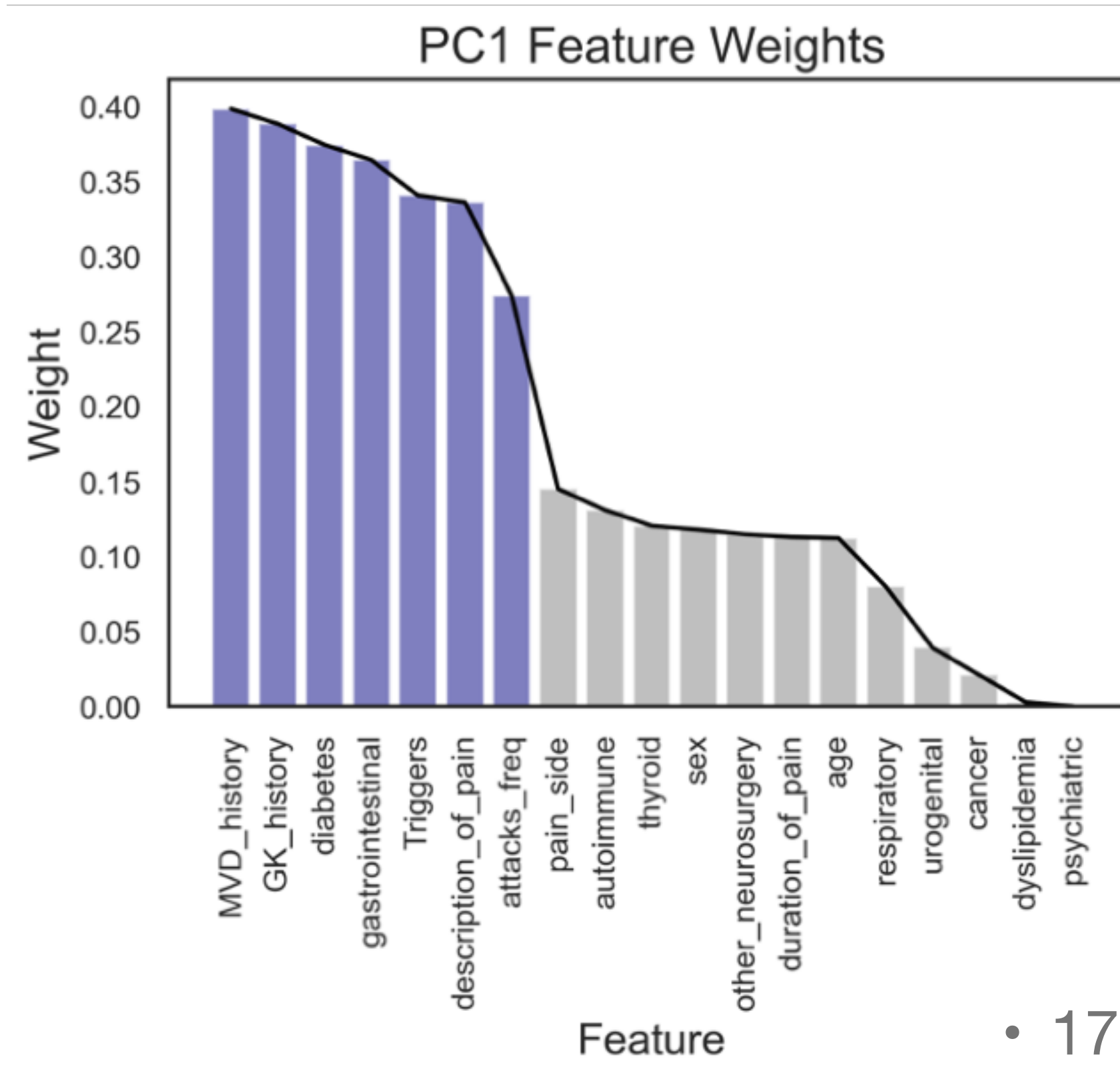
Results

Feature selection

Feature	PC1 Weight
MVD history	0.398374
GK history	0.388326
Diabetes	0.374363
Liver/GI disease	0.364386
Triggers	0.340846
Pain description	0.336244
Attack frequency	0.274016
Pain side (laterality)	-0.14505
Autoimmune comorbidities	-0.13085
Thyroid comorbidities	-0.12024
Sex	-0.11771
Other neurosurgery	-0.11459
Pain duration	0.112751
Age	-0.11199
Respiratory comorbidities	-0.08006
Urogenital comorbidities	0.039214
Cancer	-0.021
Dyslipidemia	0.002584
Psychiatric comorbidities	1.62E-27

- 17 PCs to explain 95% of variance in data.

- PC1 vs Duration of response r = -0.51 [-0.67 – -0.31] (p = 0.0002)