State Distance Analysis: Step Distance vs Cosine Similarity Scatter Plot with Linear Regression Density Plot (Hexbin) 17.5 17.5 100 15.0 15.0 12.5 12.5 Step Distance 0.0 Step Distance 0.0 60 7.5 7.5 40 5.0 5.0 20 2.5 2.5 -0.2 -0.2 0.0 0.2 0.4 0.6 8.0 0.0 0.2 0.4 0.6 8.0 1.0 1.0 Cosine Similarity Cosine Similarity Distribution of Cosine Similarities Distribution of Step Distances 500 1400 1200 400 1000 Frequency 0000 Frequency 800 200 600 400 100 200 Pearson r: 0.0310 (p=0.0022) Spearman p: 0.0218 (p=0.0317) R<sup>2</sup>: -5.2704 0 2.5 7.5 10.0 12.5 15.0 N samples: 9733 0.2 0.4 0.6 8.0 1.0 5.0 17.5 Step Distance Cosine Similarity