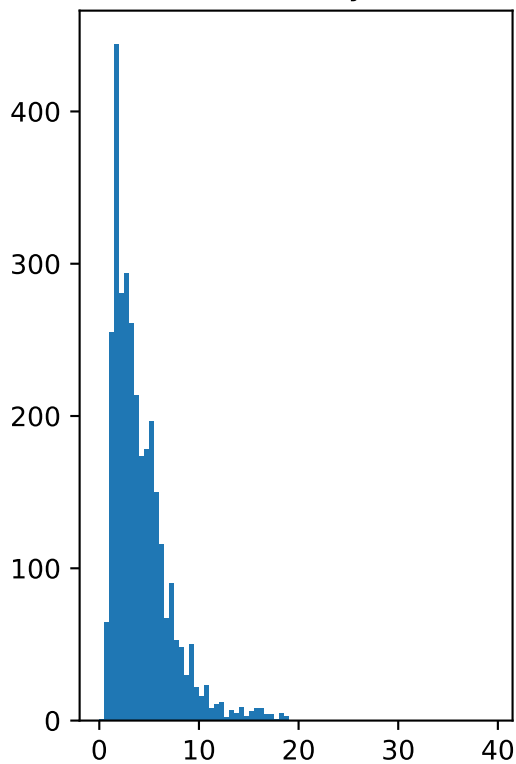Structural output CGA