

The figure consists of three scatter plots arranged horizontally, each showing the distribution of four classes (g, r, i, z) in the r - m plane for different values of α . The legend indicates that 'g' is represented by purple dots, 'r' by blue dots, 'i' by green dots, and 'z' by orange dots.

- Left Plot ($\alpha = 0.0$):** The classes are highly mixed. The 'z' (orange) and 'i' (green) classes are concentrated in the lower-left region, while 'r' (blue) and 'g' (purple) are more scattered, with 'g' appearing in the upper-right.
- Middle Plot ($\alpha = 0.1$):** There is a slight improvement in separation. The 'z' (orange) and 'i' (green) classes are more distinct from each other and from the other two classes.
- Right Plot ($\alpha = 0.2$):** The separation is most pronounced. The 'z' (orange) and 'i' (green) classes are well-separated from the 'r' (blue) and 'g' (purple) classes, which are also more distinct from each other.

