```
function s = colorByCardinality(s, A)
%COLORBYCARDINALITY Colors the edges of the incidence matrix by the number
% of vertices within each edge.
% s: scatter object representing the incidence matrix
% A: incidence matrix
[i, \sim] = find(A);
colors = zeros(size(i));
cards = sum(A,1);
count = 1;
for index = 1:length(cards)
    for k = 1:(cards(index))
        colors(count) = cards(index);
        count = count + 1;
    end
end
% s.CData = colors(idx);
s.CData = colors;
end
```

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