

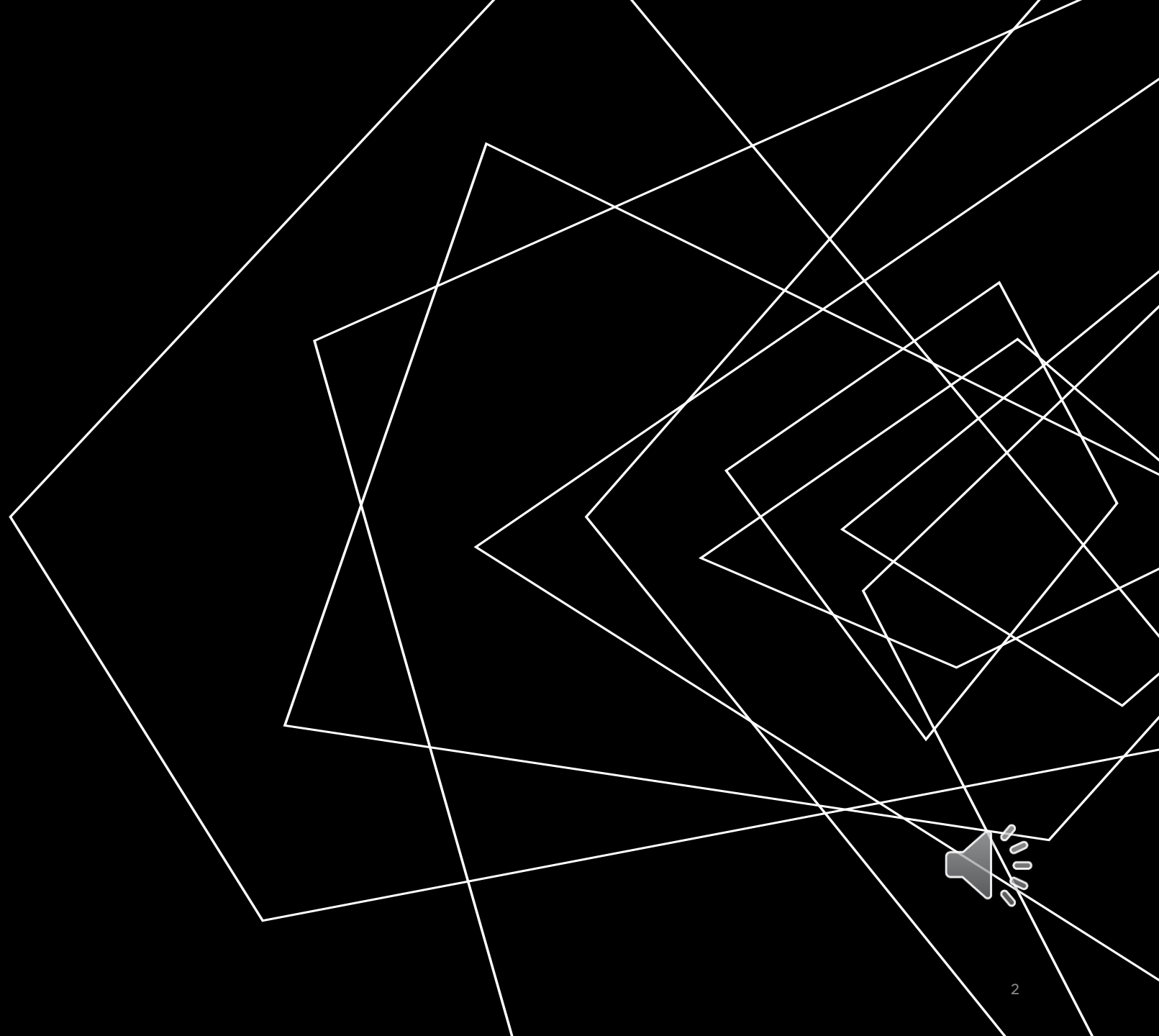
Abstract geometric lines in the top-left corner of the slide, consisting of several overlapping, irregular polygons and lines in black and grey.

BACTERIAL METABOLIC NETWORK ANALYSIS



GROUP 10

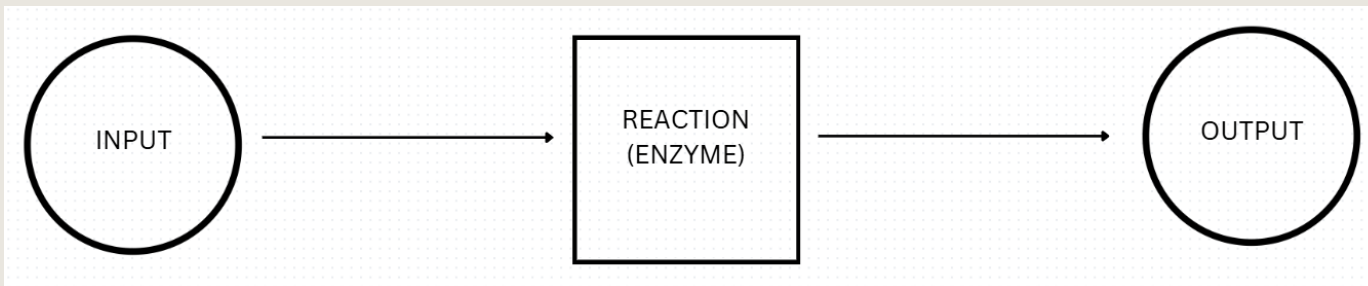
Dylan Smith

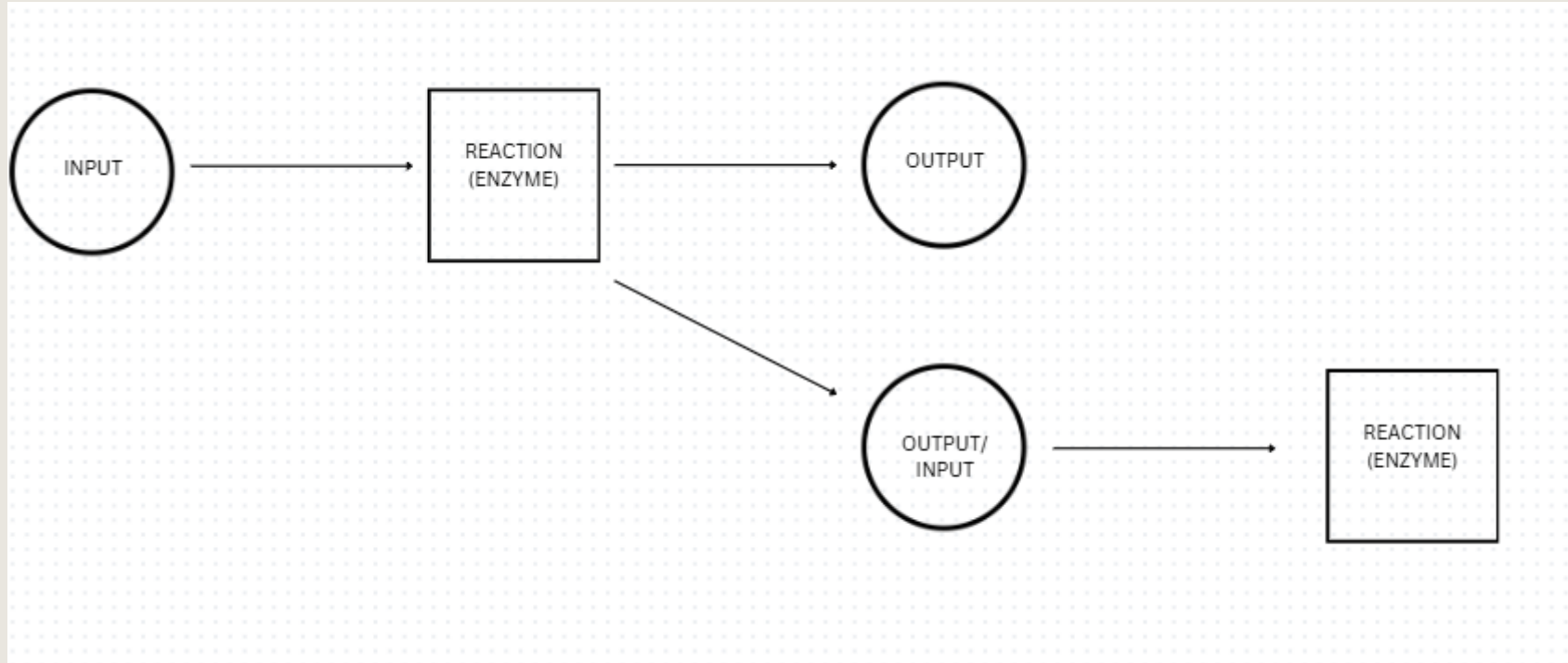


QUESTIONS SOUGHT TO ANSWER

- How do different organisms differ and converge on network structure and resource allotment for different functional modules of the metabolic network?
- Can the network structure of the metabolic network tell us anything interesting about metabolism?



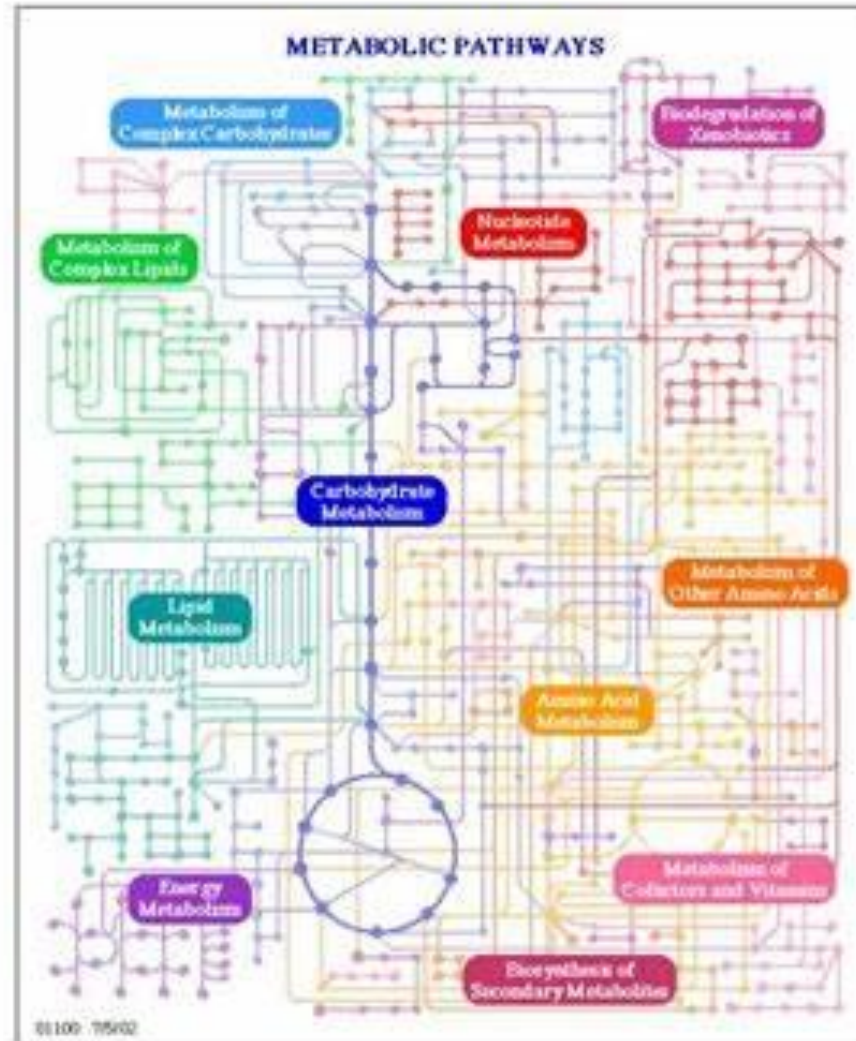




Metabolic Networks

E. Coli metabolism

KEGG: Kyoto Encyclopedia
of Genes and Genomes
(<http://www.genome.ad.jp/kegg/kegg.html>)



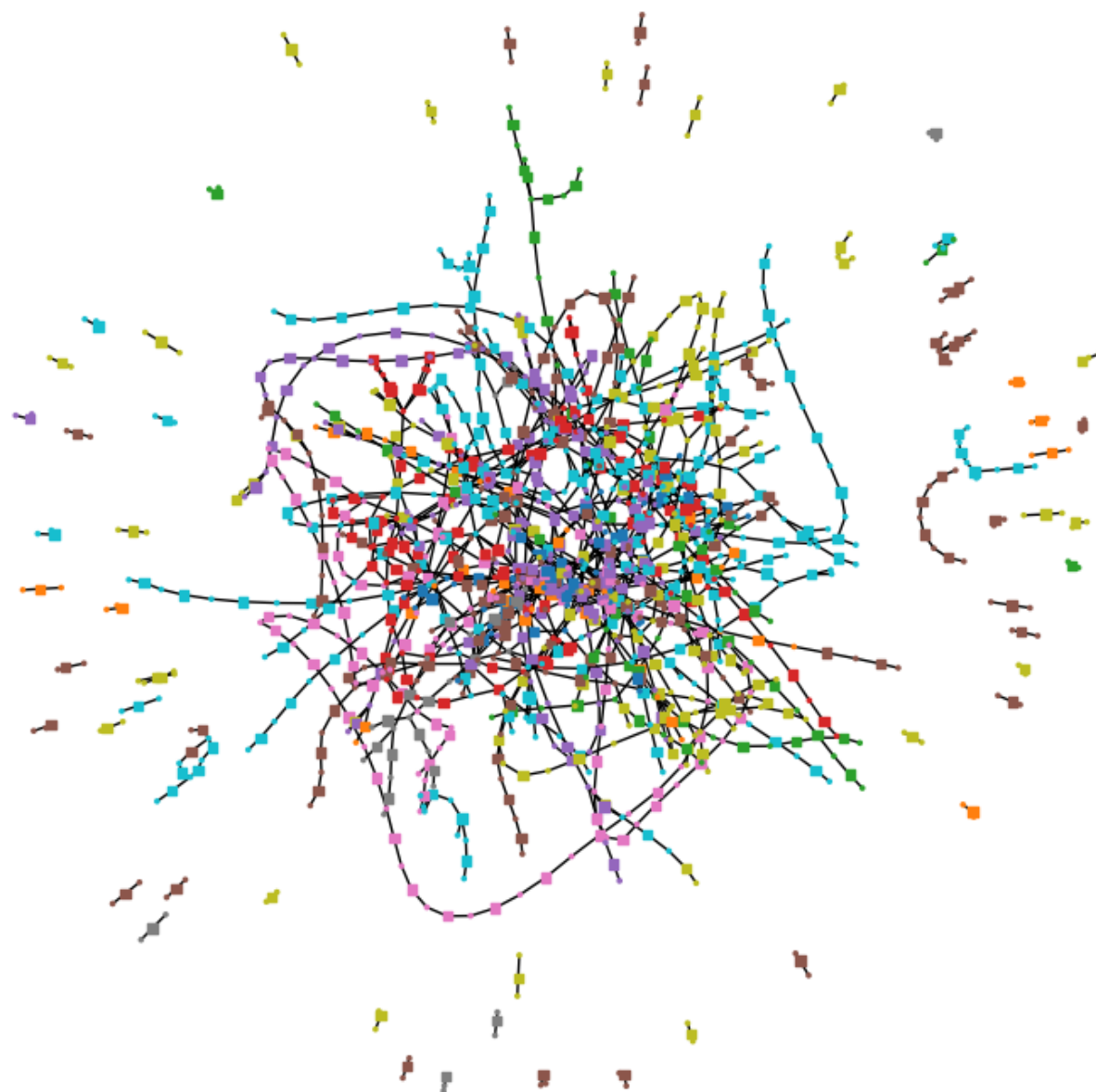
Organisms

- Escherichia coli ('eco')
- Bacillus subtilis ('bsu')
- Staphylococcus aureus ('sau')
- Mycobacterium tuberculosis ('mtu')
- Pseudomonas aeruginosa ('pae')
- Salmonella enterica ('sen')
- Helicobacter pylori ('hpy')
- Lactobacillus acidophilus ('lba')
- Streptococcus pneumoniae ('spn')
- Corynebacterium diphtheriae ('cdi')

Functional Modules

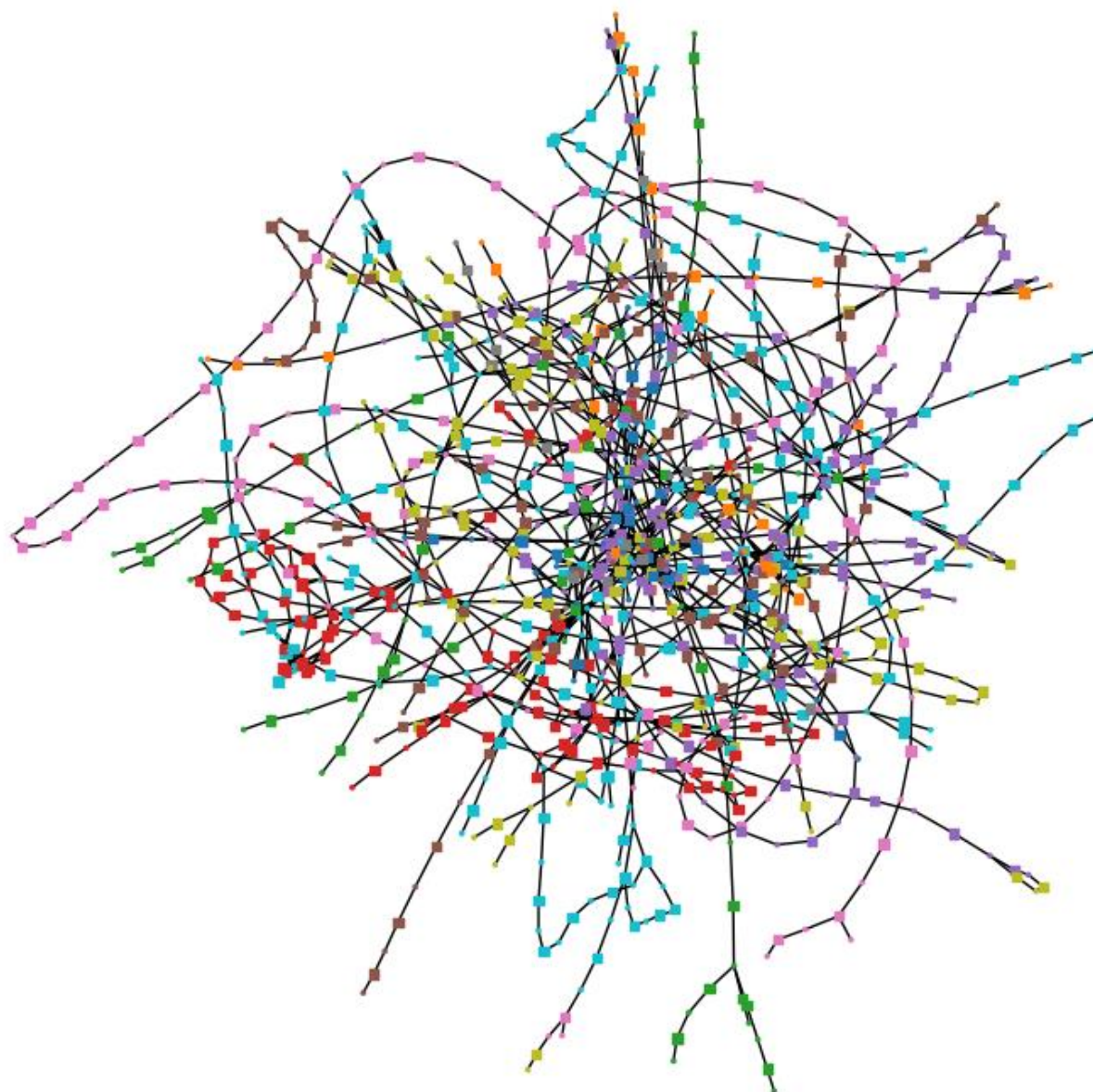
- Biosynthesis of secondary metabolites
- Microbial metabolism in diverse environments
- Carbon metabolism
- 2-Oxycarboxylic acid metabolism
- Fatty acid metabolism
- Biosynthesis of amino acids
- Nucleotide metabolism
- Biosynthesis of nucleotide sugars
- Biosynthesis of cofactors
- Degradation of aromatic compound





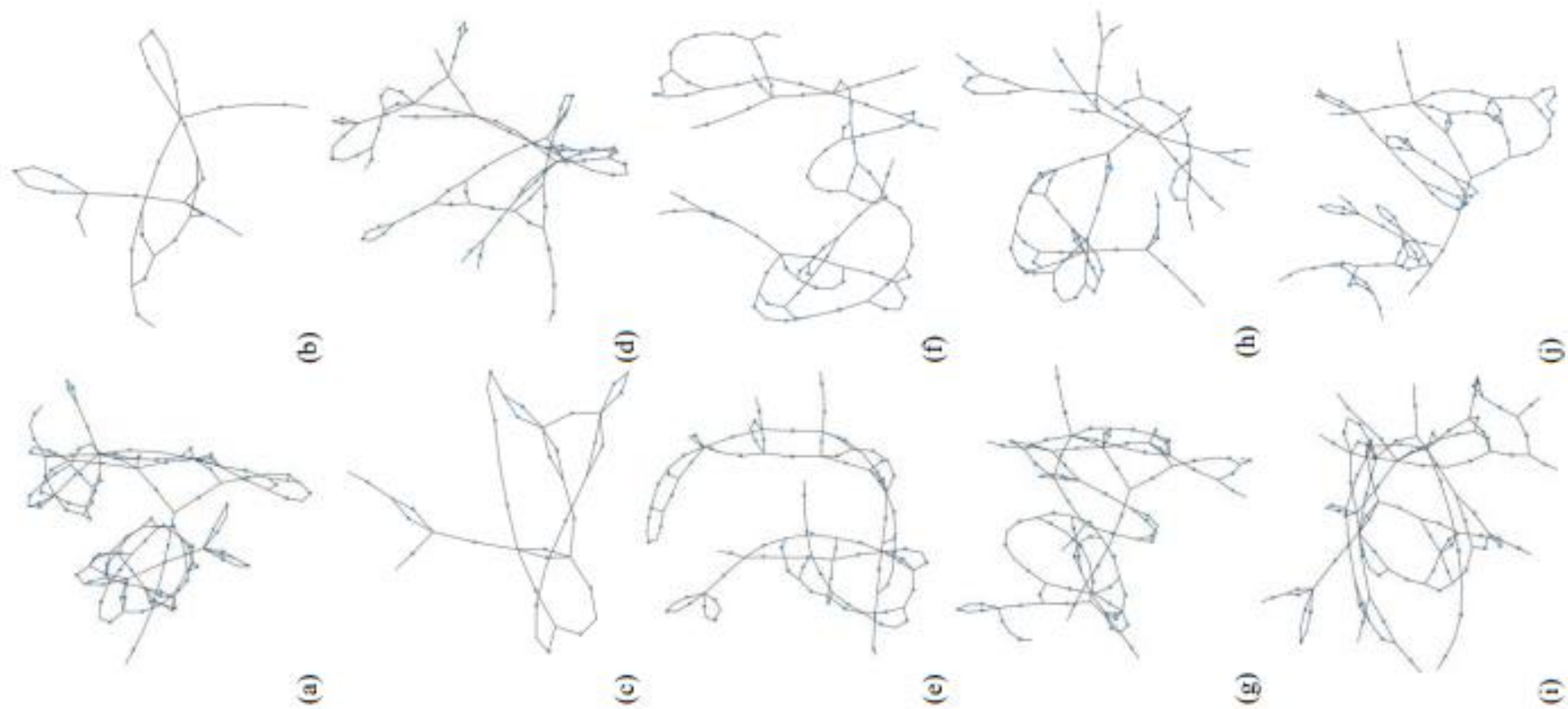
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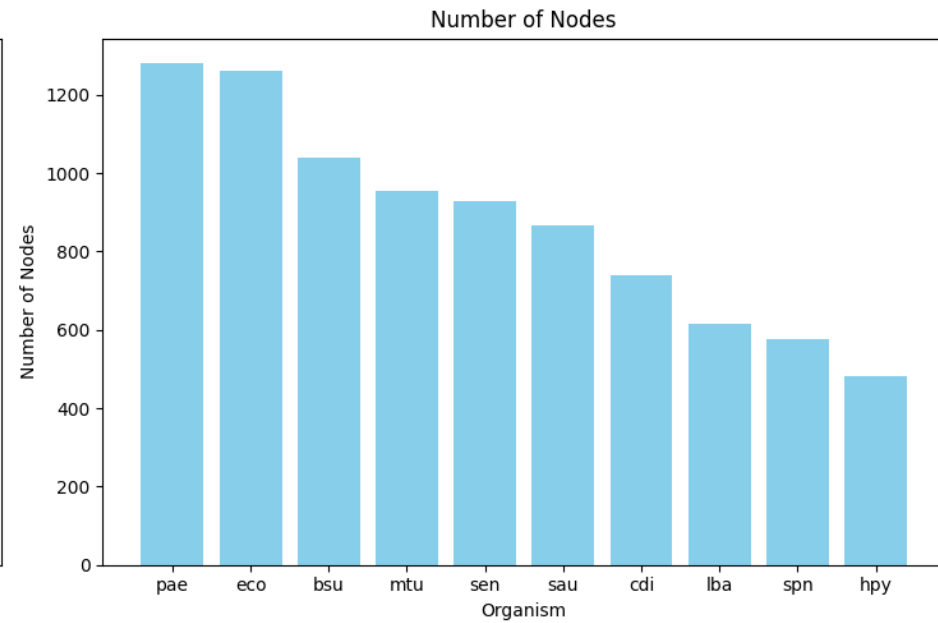
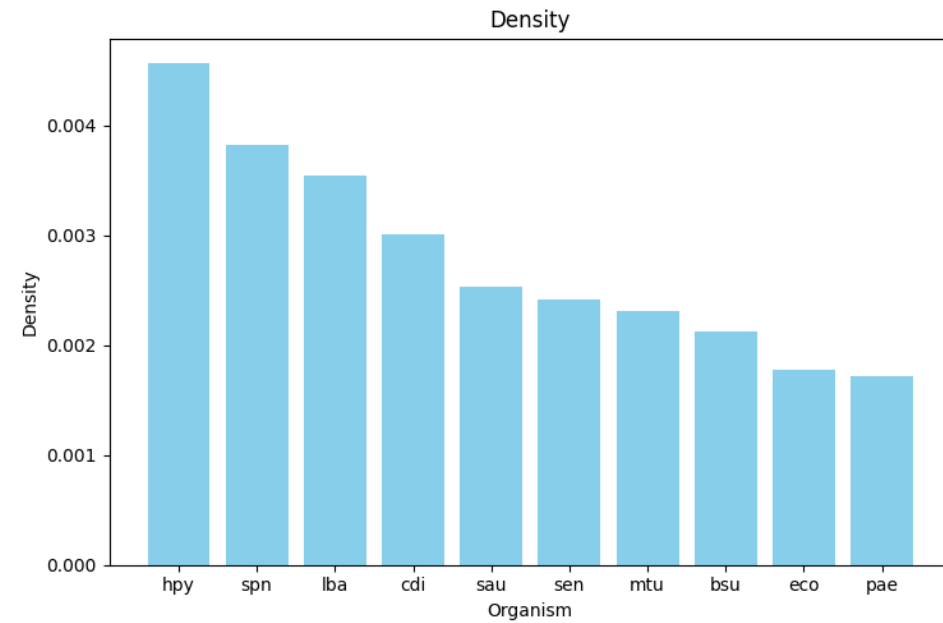
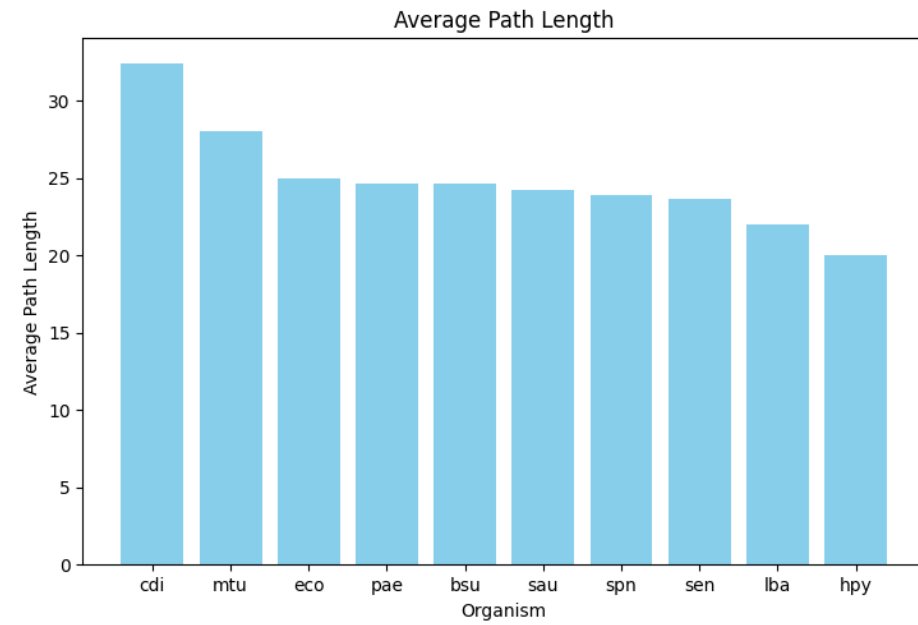
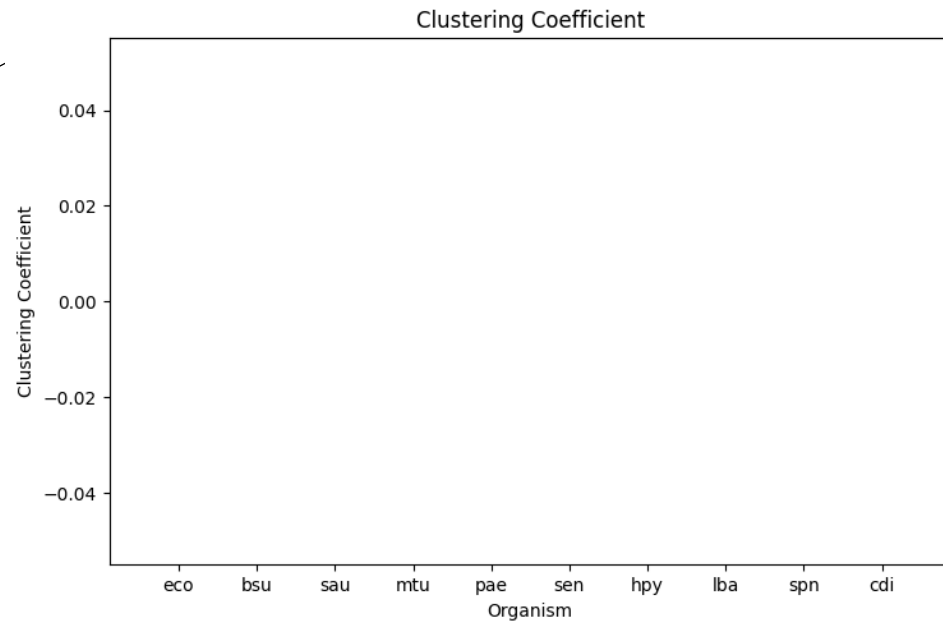


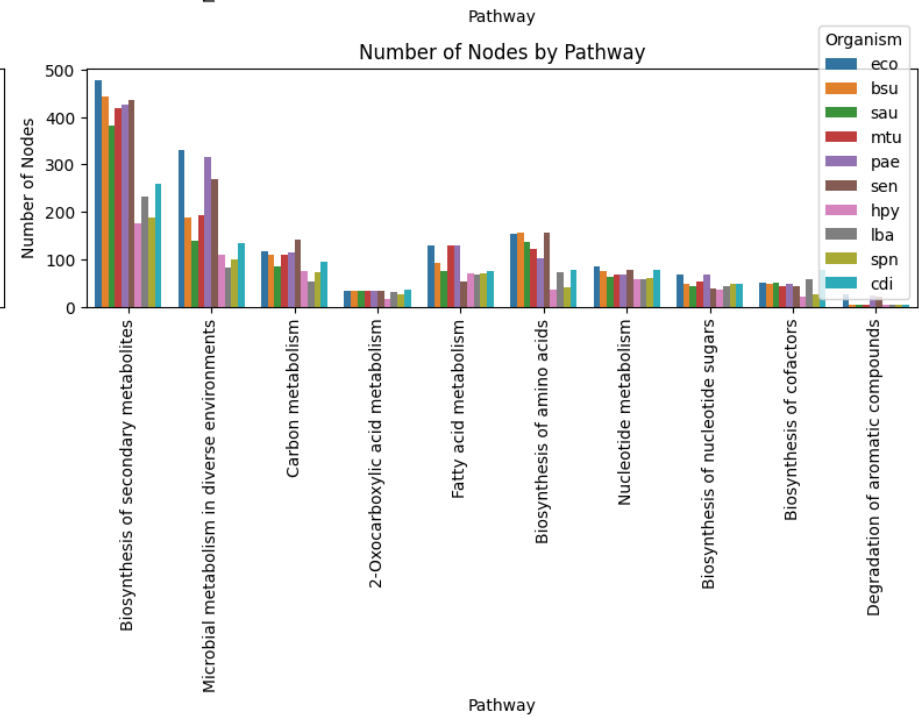
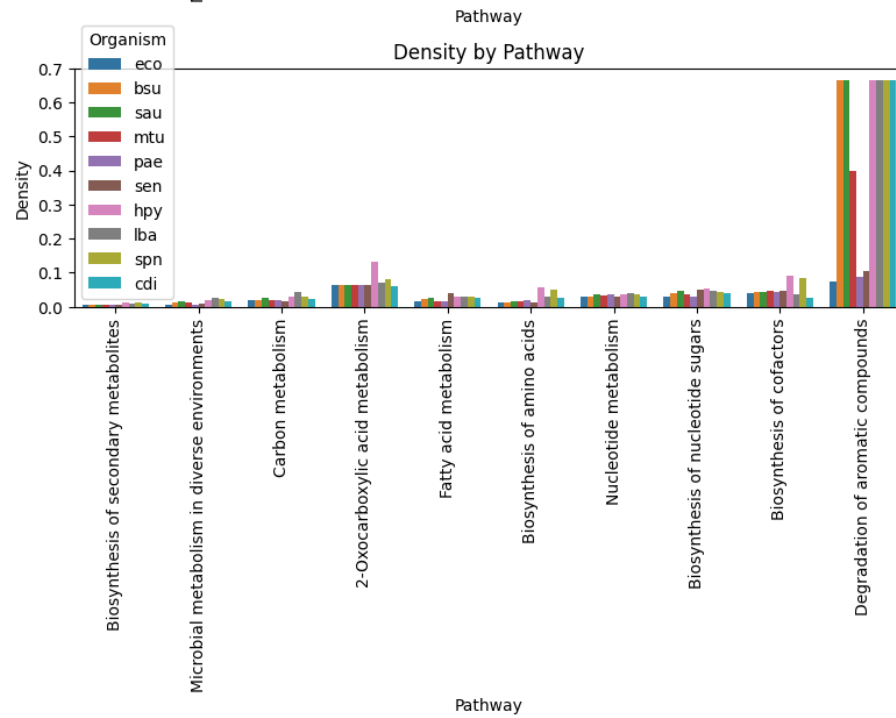
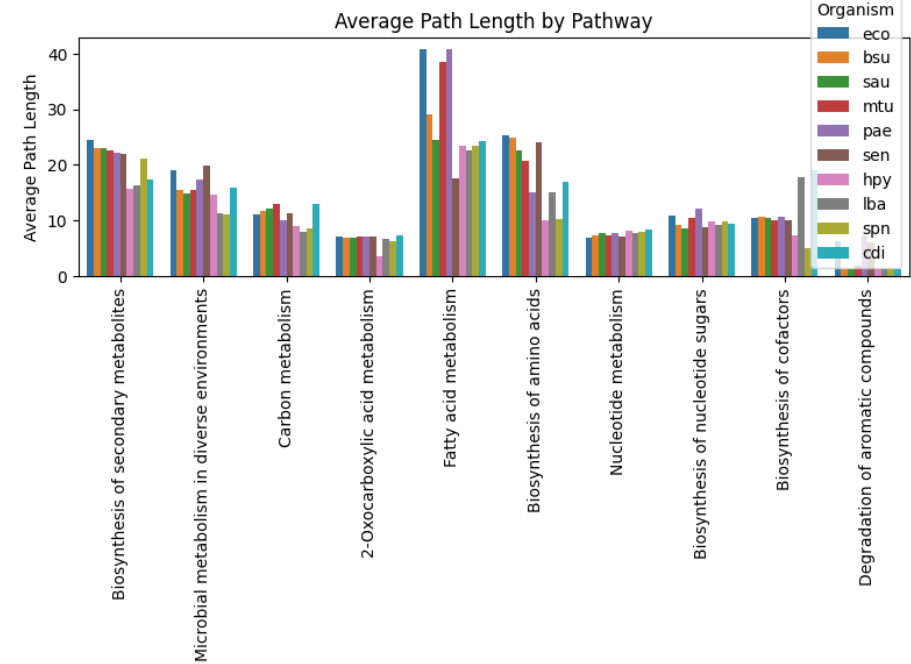
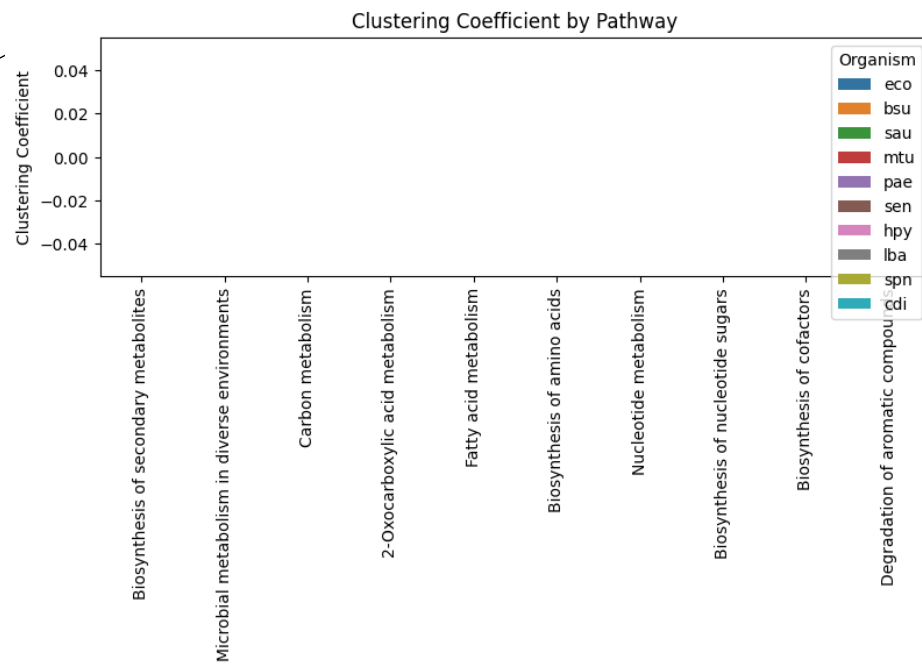


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A series of white, thin, overlapping geometric lines on a black background, forming a complex, abstract pattern on the left side of the slide.

THANK YOU

