CSE 300: Online Assignment

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July 21, 2022

1 Introduction

This assignment has been designed to assess the preparation of the students in writing scientific articles using LaTeX. This assignment covers a variety of components that are commonly used in scientific manuscripts.

1.1 Tables

We wish to place Table 1 right here.

Table 1: **Optimization scores for Method-1 and Method-2 on different datasets covering various model conditions.** We show average scores of two optimization criteria for various model conditions.

Simulation Condition			Optimization Score			
Dataset	Complexity	Model Condition	Score 1		Score 2	
			Method-1	Method-2	Method-1	Method-2
D1	Easy	M1	7,425.55	770.00	929.55	10
		M2	7,657.00	9,179.00	716.15	20
	Hard	M3	54.00	9,007.15	3,759.00	30
		M4	74.00	5567.15	99.00	25
D2	Moderate	M1	34.00	273.00	321.60	34
		M2	Not Applicable		16.00	11
		M3	657.00	179.60	716.00	19

1.2 Figures

We intend to put Figure 1 at the top of a page.

1.3 Equations

Let $n_1|n_2|n_3$ be a tripartition defined on an internal node u of a binary tree T. The number of tripartitions mapped to u is given by Eqn. 1.

$$\begin{aligned}\mathcal{NQ}(n_1,n_2,n_3) &= \binom{n_1}{2}\binom{n_2}{1}\binom{n_3}{1} + \binom{n_2}{2}\binom{n_1}{1}\binom{n_3}{1} + \binom{n_3}{2}\binom{n_1}{1}\binom{n_2}{1} \\ &= \frac{n_1 n_2 n_3 (n_1+n_2+n_3-3)}{2}\end{aligned} \tag{1}$$

1.4 Equations2

Let C be a simple piecewise smooth curve that bounds a region D in the plane. If $P(x,y)$ and $Q(x,y)$ have continuous partials in an open region containing D, then $\int_C P\,dx + Q\,dy = \iint_D \frac{\partial Q}{\partial x} - \frac{\partial P}{\partial y}$

If **F** is a vector field with third component 0 defined on a domain D enclosed by boundary C then
$\oint_C F \cdot dr = \iint_D (\nabla \times F) \cdot kA$

Similarly, if C is defined by $r(t) = \langle x(t), y(t) \rangle$
$\oint_C F \cdot dx = \iint_D \nabla \cdot FA$

2 Conclusions

The major objectives of this assignment are listed below (please do not ignore the font sizes).

- To see if the students have adequately practiced different aspects of writing in LaTeX.
- To assess the ability of the students in preparing manuscripts in LaTeX.
- To see if the students can add various basic components (e.g., tables, figures, equations) to a LaTeX manuscript.
- To see if the students can leverage the available materials (both offline and online) to do something which has not explicitly been taught in the class.

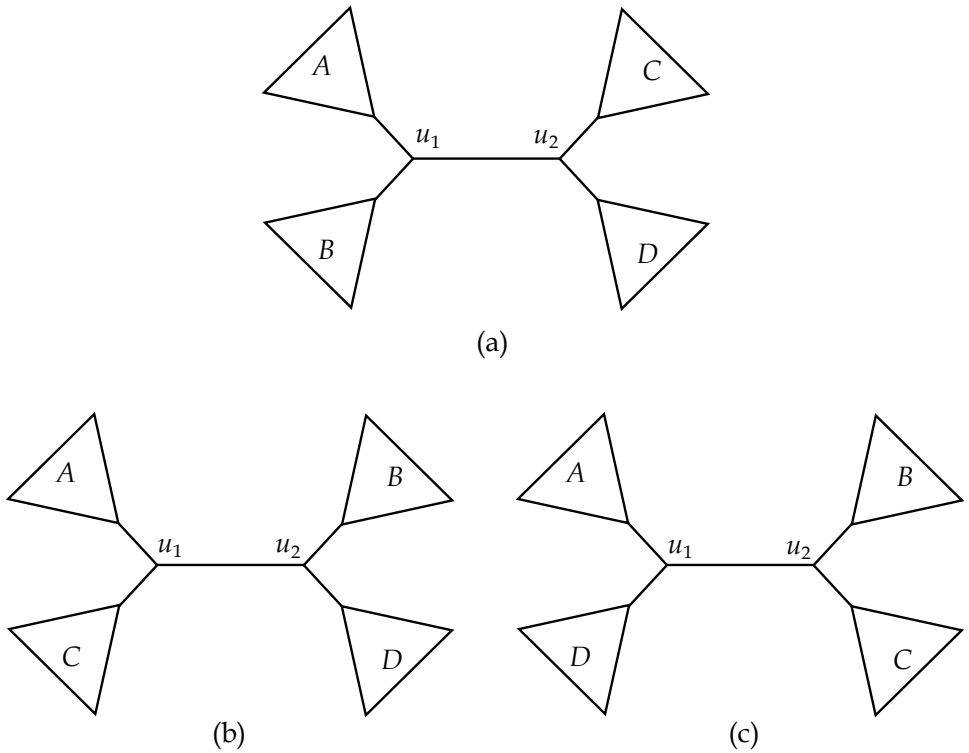

Figure 1: **Nearest Neighbor Interchange (NNI) move on an internal edge.** (a)A species tree ST , and (b-c)the neighbors of ST resulting from one NNI move on edge $e = (u_1, u_2)$. *A, B, C,* and *D* are the sets of taxa in the four subtrees around edge *e*.

Item List			
Item Name or Product Name	ALPHA 2 Code	ALPHA 3 Code	Numeric Code
Item001	AF	AFG	001 002
Item002	AX	ALA	003
Item003	AL	ALB	004 005 006 008
Item004	DZ	DZA	009 010
Item005	AS	ASM	011 012
Item006	AD	AND	013
Item007	AO	AGO	014

Figure 2: **Same figure upside down**