

Bacharelado em Ciência da Computação
Universidade Federal do ABC

Algoritmos e Estruturas de Dados II

AutoComplete com Trie

Allan Holanda Targino

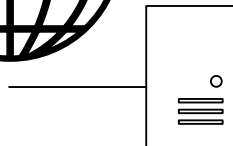
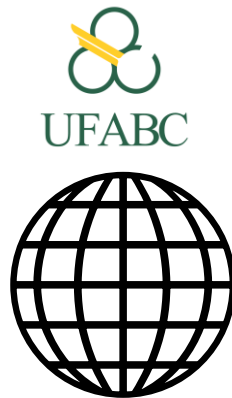
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Elsio Antunes

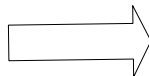
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Dezembro de 2016

Motivação



```
{  
  system_name: [ ],  
  accession: "TNC000000000",  
  schema_version: "2",  
  alternate_accessions: [ ],  
  culture_harvest_date: "2012-04-10",  
  aliases: [  
    "Richard-Sperre/MCF-7 rep 3"  
  ],  
  email: [ ],  
  submitted_by: [ ],  
  uuid: "56e9ff2b-25ao-4a58-9928-f63b6622",  
  biosample_type: "Immortalized cell line",  
  passage_number: 5,  
  notes: "(PMTD: 4357757)",  
  source: [ ],  
  developmental_name: [ ],  
  donor: [ ],  
  pooled_from: [ ],  
  status: "CURRENT",  
  part_of: [ ],  
}
```



Metodologia

- Linguagem: Javascript
- Estrutura: Trie
- Compactação: LZW

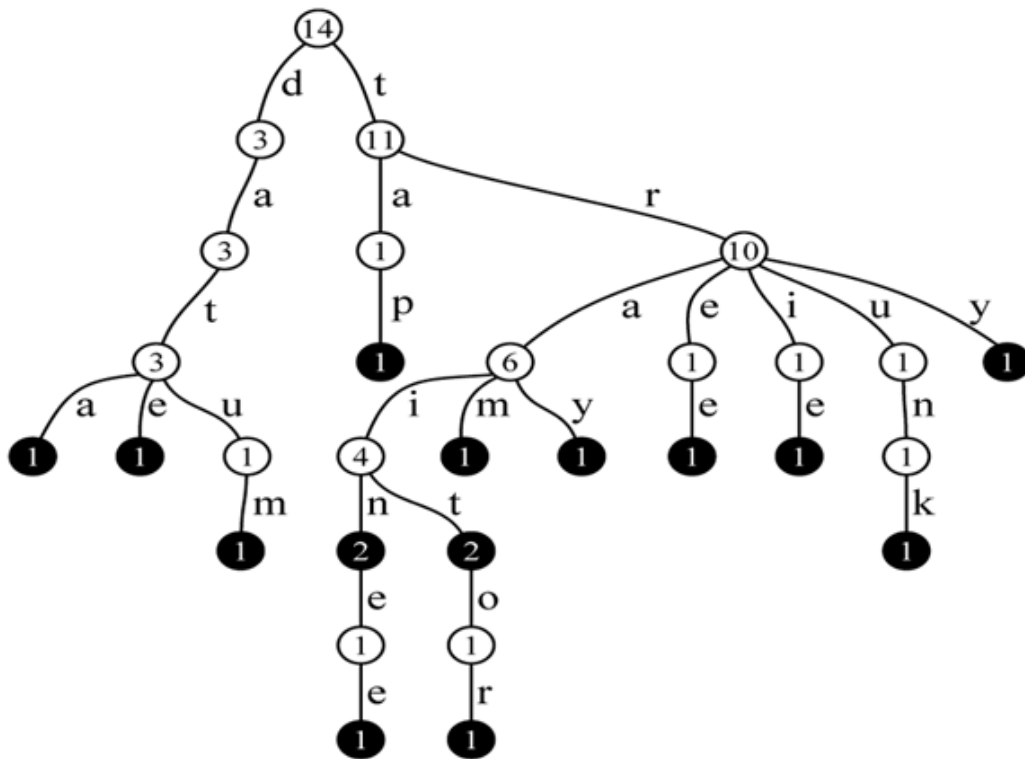
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trainee

```
String buscalinear(A, str) {  
    for(i=0; i<sizeof(A); i++)  
        if(A[i] == str)  
            return i;  
    return nil;  
}
```

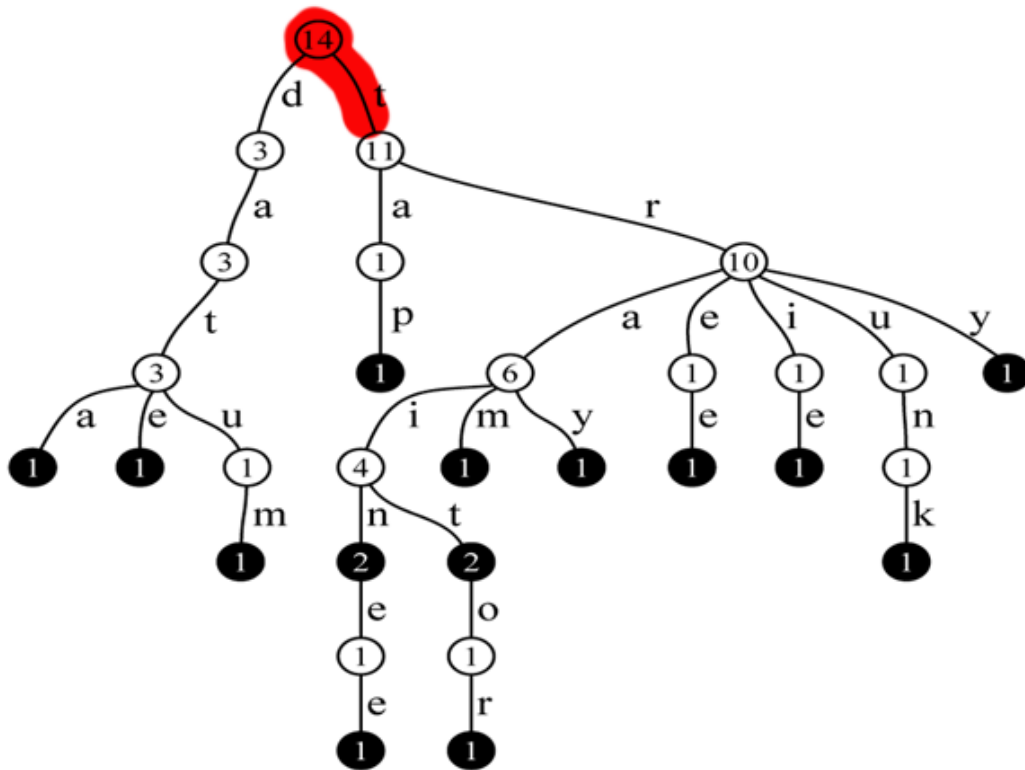
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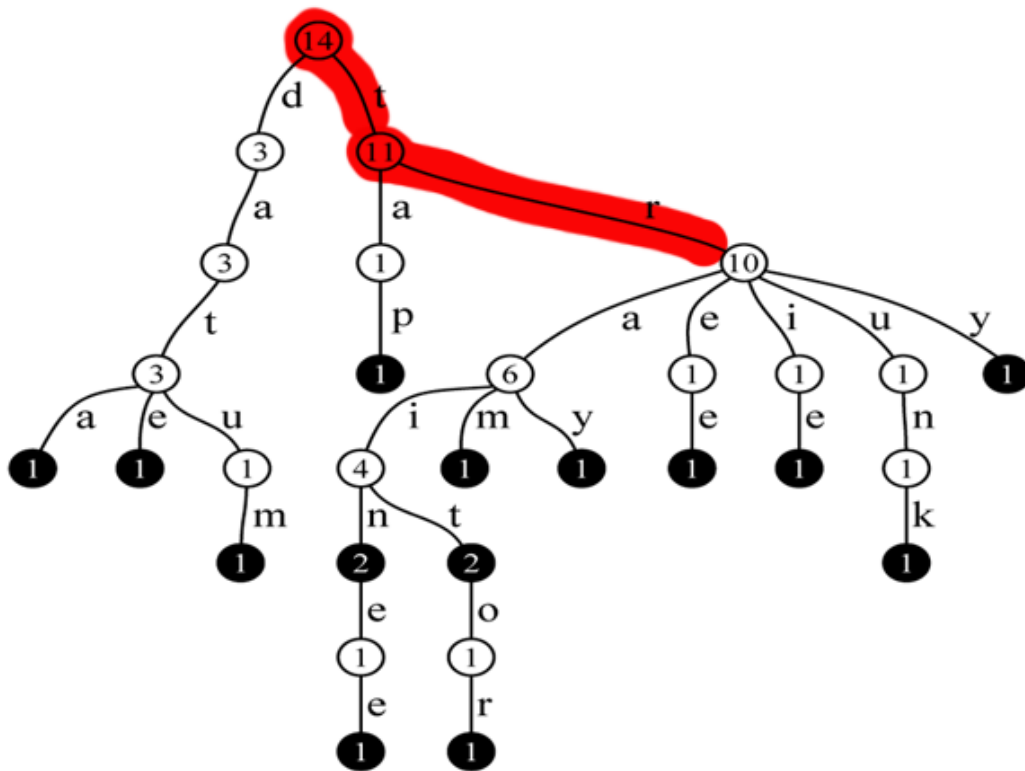
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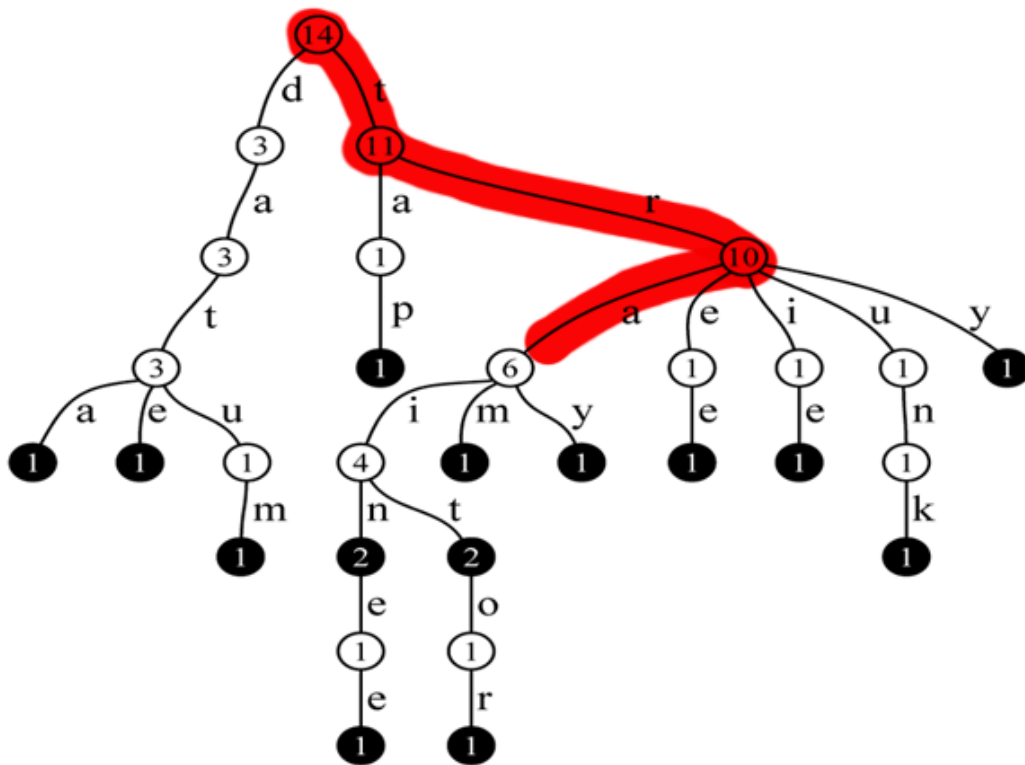
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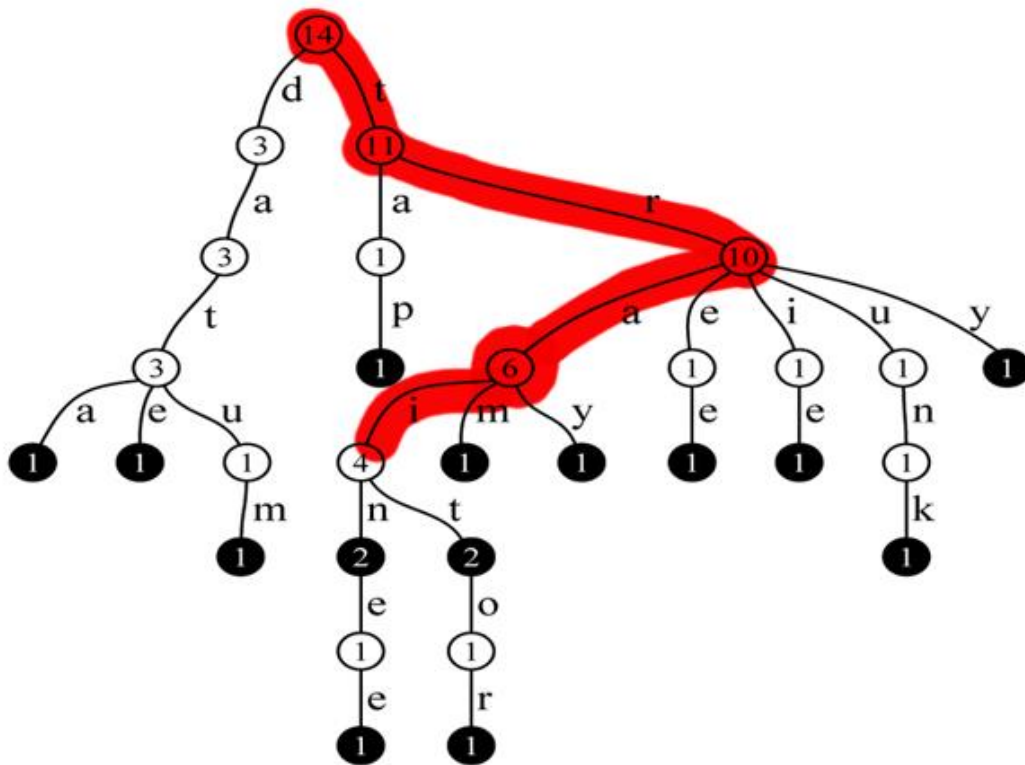
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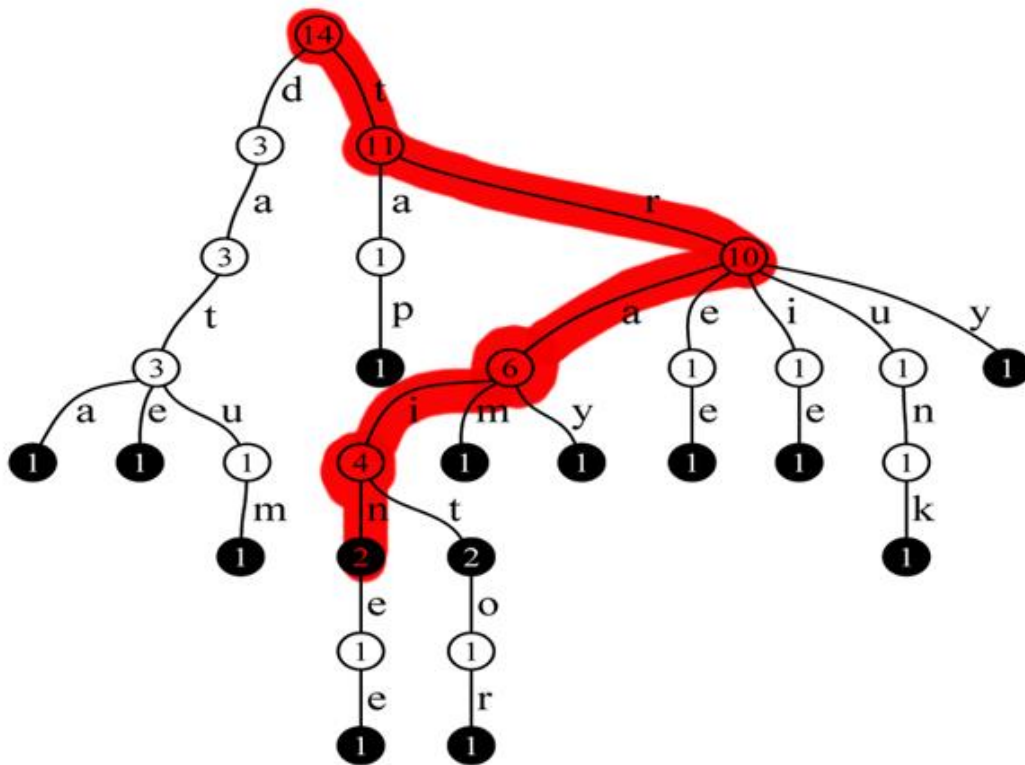
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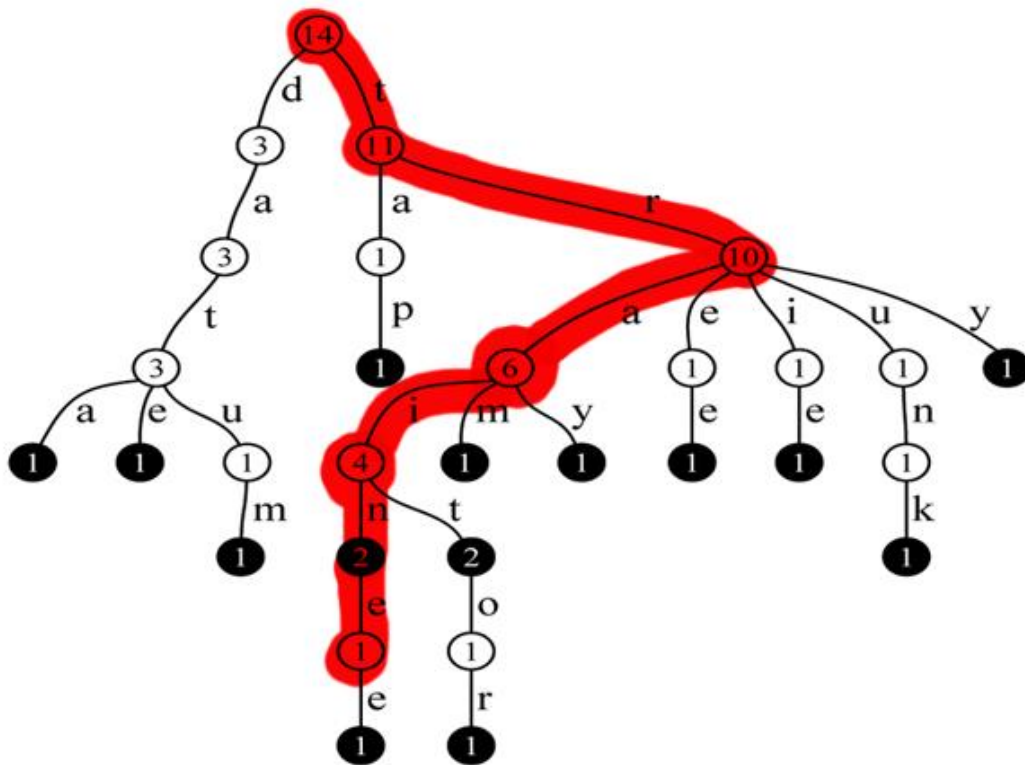
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:Bases Matematicas

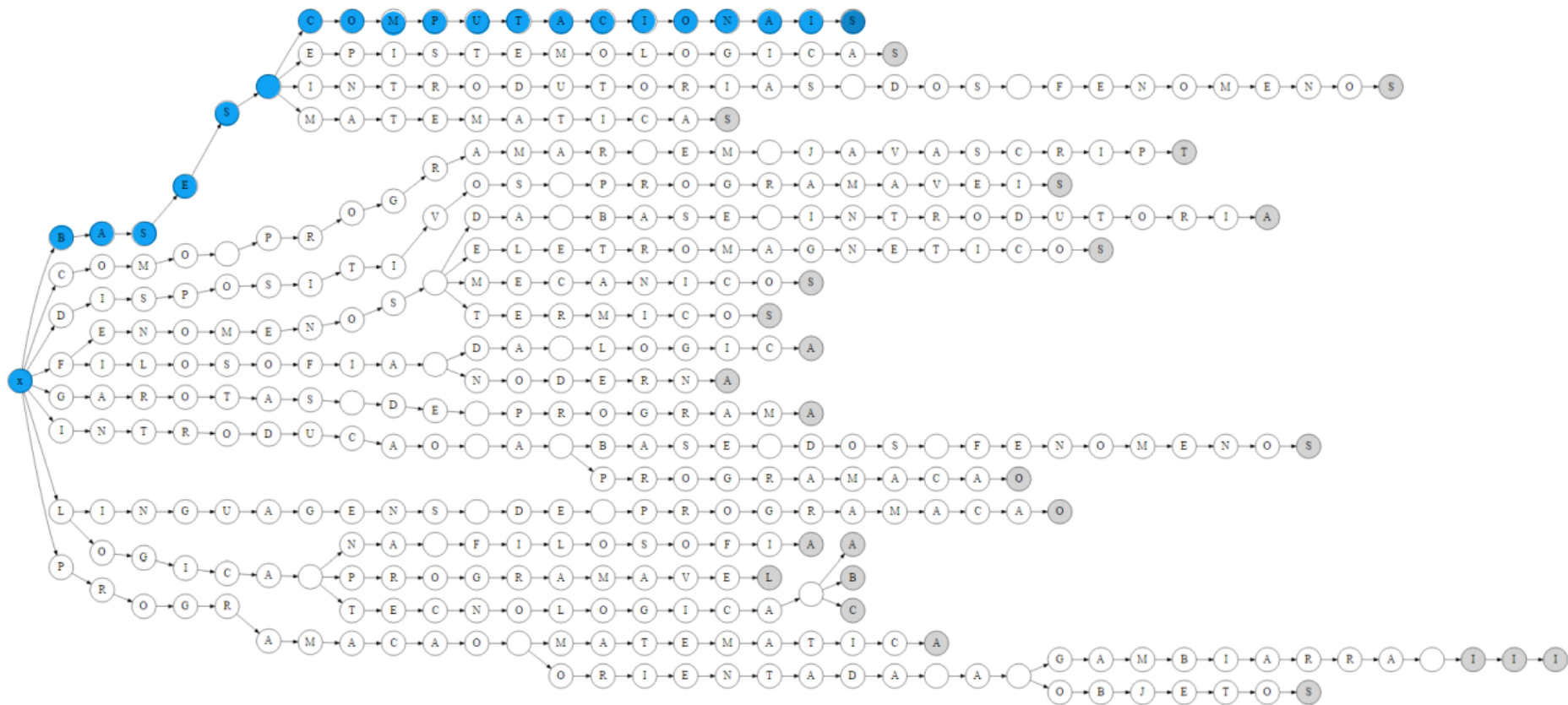
base

- 1 Base Experimental das Ciencias Naturais
- 2 Bases Biologicas para Engenharia I
- 3 Bases Biologicas para Engenharia II
- 4 Bases Computacionais da Ciencia
- 5 Bases Conceituais da Energia
- 6 Bases Epistemologicas da Ciencia Moderna
- 7 Bases Matematicas**
- 8 Bases Neurais da Motricidade

```
void inserir(String str) {  
    Node atual = this.root;  
    for(int i = 0; i < str.length(); i++) {  
        int k = str.charAt(i);  
        if(!atual.letra[k])  
            atual.letra[k] = new Node();  
        atual = atual.letra[k]  
    }  
    atual.fim = true;  
}
```

```
void inOrder(node, str) {  
    if (node.fim)  
        this.out.push(str)  
  
    for (var i=0; i < 256; i++)  
        ch = node.lettra[i]  
        if (ch)  
            this.inOrder(ch, str + chr(i))  
}
```

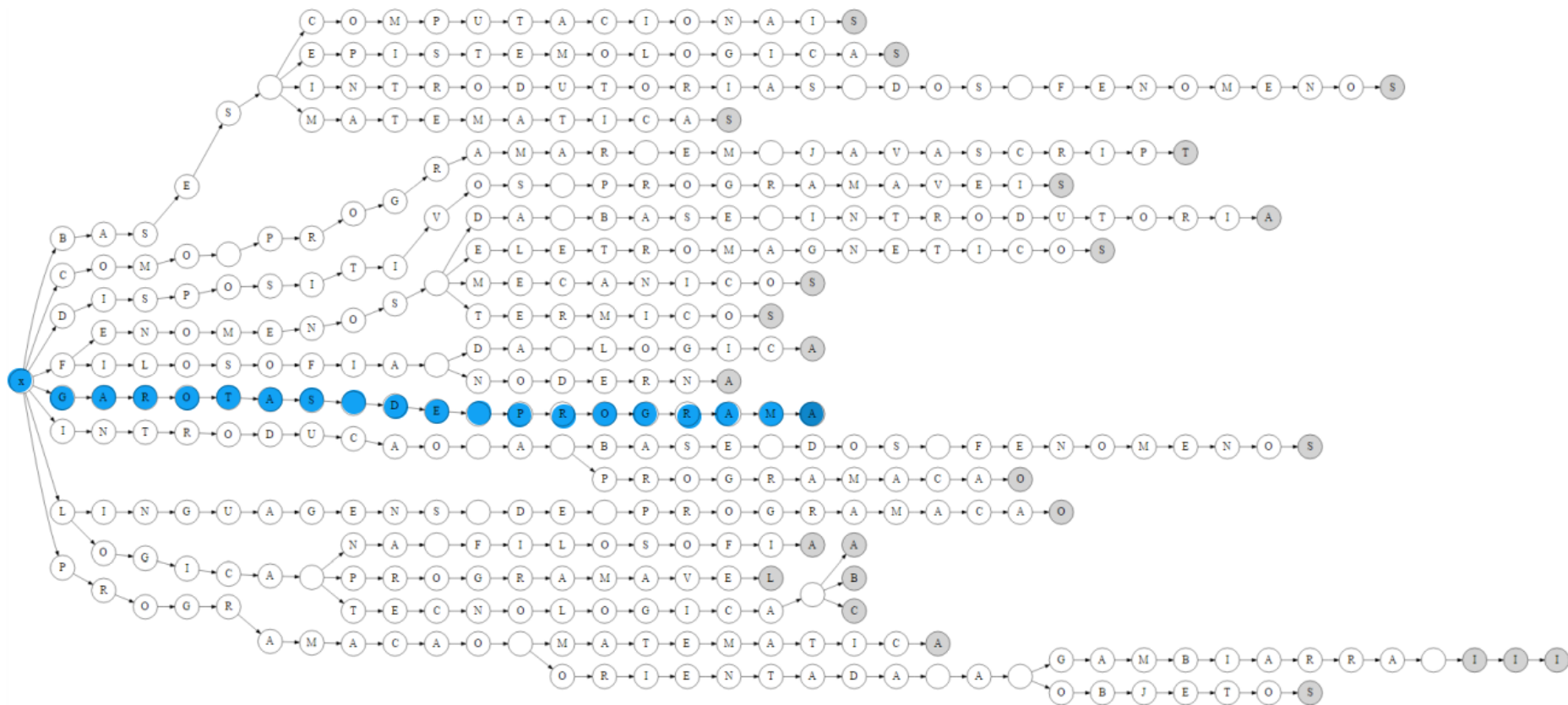
Trie Modificada



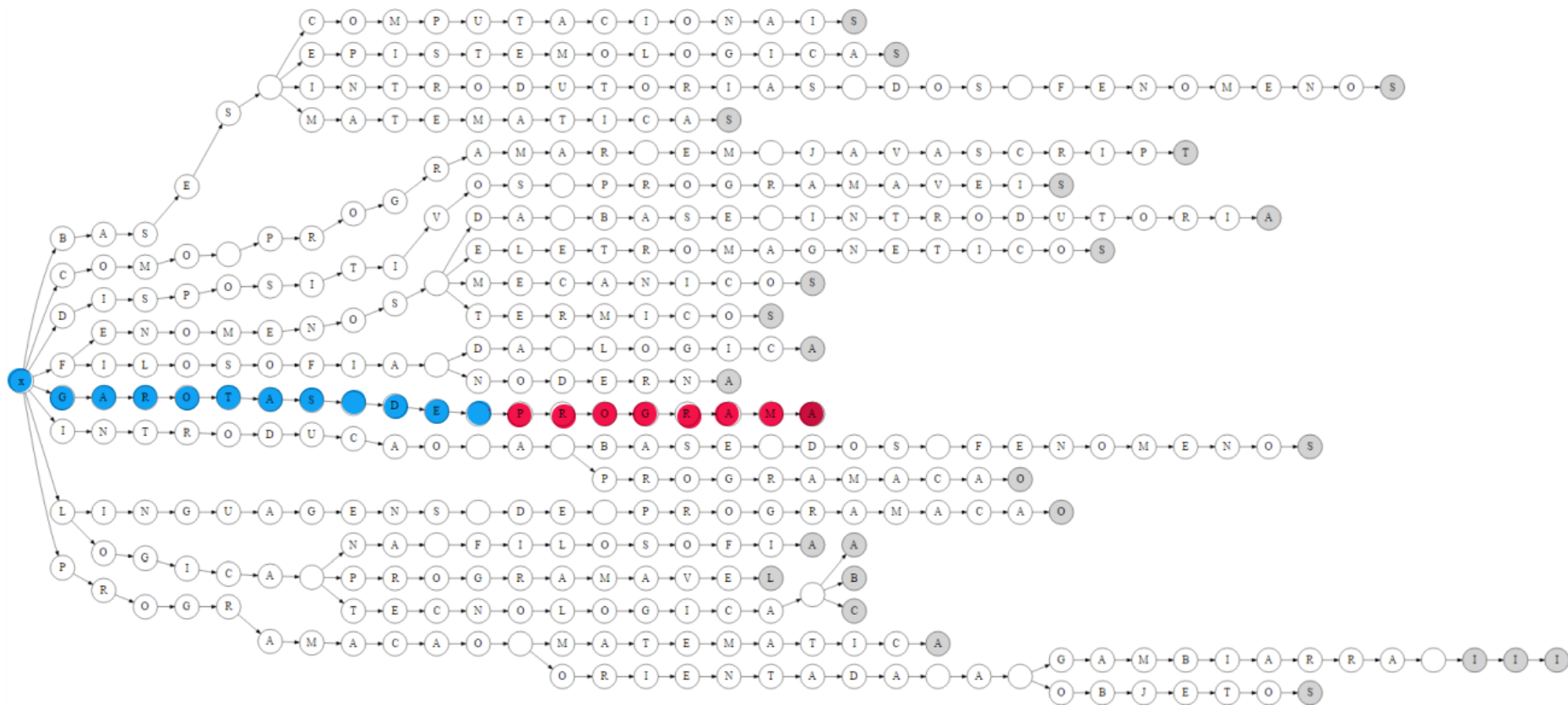
Trie Modificada



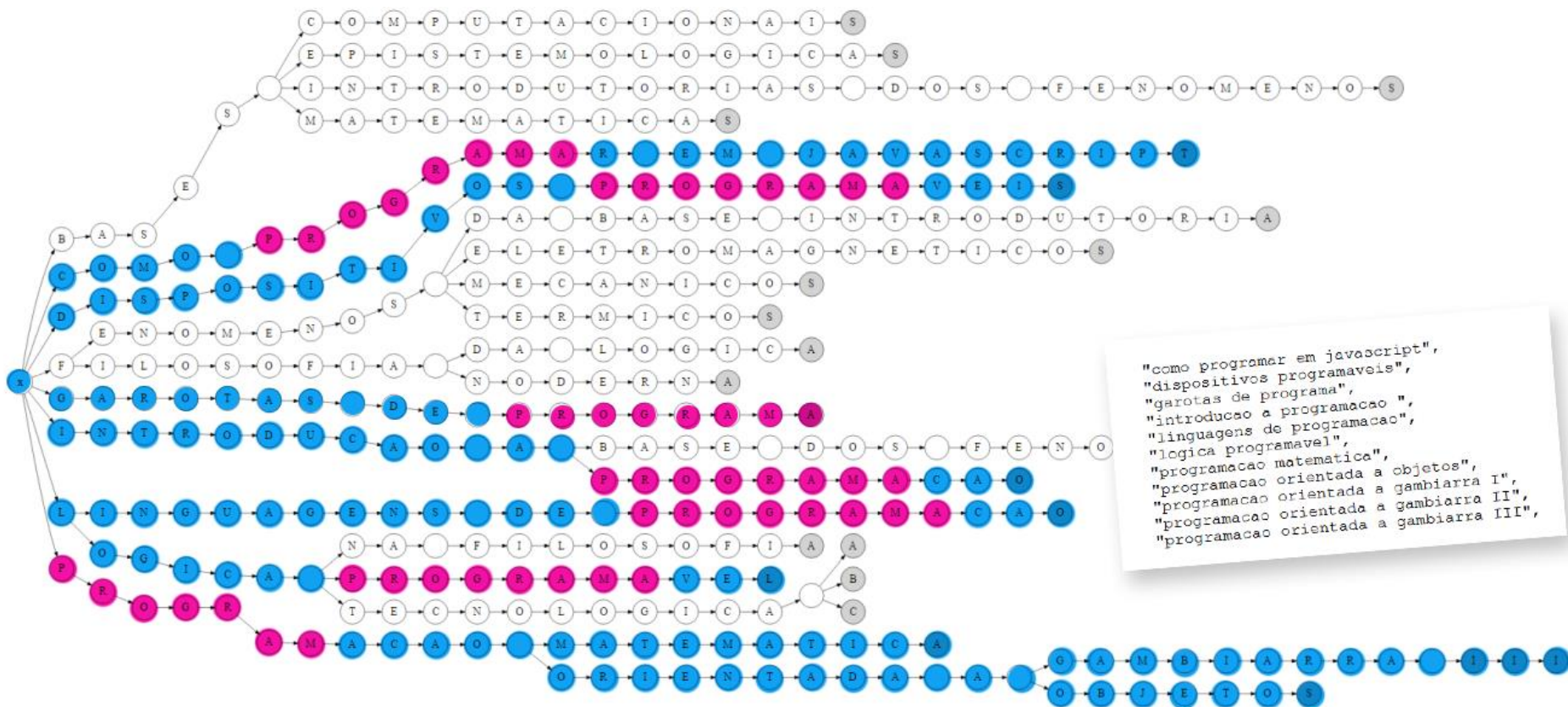
Trie Modificada



Trie Modificada



Trie Modificada



:Morfofisiologia animal comparada

animal

- 1 Biologia Animal I
- 2 Biologia Animal II
- 3 Biologia Animal III
- 4 Ecologia Animal
- 5 Morfofisiologia animal comparada

Demo

bit.ly/melhortrie

Considerações Finais

github.com/elsio/Trie

Obrigado!!!