

# **SKILL**

## **Programming Language**

Python
SQL
C
Java
JavaScript

### Linguistics

Vietnamese English French



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# **DO DUC ANH**

# **EDUCATION**

## **BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

Université Grenoble Alpes | 2021 - 2024, France

International option in mathematics and computer science. Curriculum is half in English, half in French.

## LINGUISTIC HIGH-SCHOOL MAJOR

**Foreign Language Specialized School** | 2017 - 2020, Vietnam Major in French. Minor in English.

# **EXPERIENCE**

## **RESEARCH INTERN**

## TIMC Laboratory | Summer 2022, France

Developed Python scripts to automate the visualization of biological data revolving around prokaryotic organisms and their secretion systems.

- Created interactive sunburst charts (Plotly) to visualize the hierarchical organization of prokaryotic organisms.
- Built interactive dashboards (Plotly/Dash) to summarize, analyze and extract the number of secretion systems annotated by MacsyFinder across thousands of organisms.
- Generated publication-quality sequence-annotation plots from the data mined by MacsyFinder.

The visualizations identified multiple sampling/research biases over different groups of organisms.

All code was well documented and proved to be highly reusable. The results were integrated into the lab's data pipeline.

#### **RESEARCH INTERN**

### G-SCOP Laboratory | Summer 2023, France

Analyzed a randomized algorithm used for finding a maximum stable subset in Circle-Plus-Triangles graphs.

A Cycle-Plus-Triangle graph is a graph of t disjoint triangles and a Hamilton on the 3t vertexes. It is proven to have a 3-coloring. However, there is no known efficient algorithm to even find a maximum stable subset of size t.

- Managed to prove almost-sure termination in expected quadratic time for simple instances where the all the triangle has the same form. This was the original goal of the internship.
- Proposed new instances that have worse experimental runtime than all previously known instances by the researchers.

### RESEARCH INTERN

### GIPSA Laboratory | Winter 2023, France

Investigate frequently-omitted ending consonants in spontaneous Vietnamese speech. The internship is divided into three main missions:

- Labeling recording using TextGrid files manually and automatically with Whisper.
- Writing scripts to extract data from Praat.
- Performing statistical inference on the extracted data.