New York University, NYU Shanghai, Shanghai, China, Class of 2023

Bachelor of Science, Computer Science, CGPA: 3.3 / 4.0

Relevant Coursework: Software Engineering, Functional Programming, Information Visualization, Data Structures, Basic Algorithms, Computer System Organizations

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#### **EXPERIENCE**

Intern, IT Department, UniMed UniHealth Group, Dhaka, Bangladesh

Oct, 2024 - Present

Coordinating with the IT team to identify and contribute to the different works done by the IT department: computer networking, database management, hardware support, etc.

#### **PROJECTS**

Oalb+ (Diango)

Aug, 2022 - Dec, 2022

Collaborated with my four team members on all stages of **building a web application prototype** letting patients meet doctors online in the region of United Arab Emirates, a work that was received well.

- Designed the class diagram and one of the sequence diagrams that guided the project.
- Built the optional feature letting prospective doctors upload their credentials as static files (diploma, license, etc) to the app database, thereby, going above and beyond what was required for the work.

## Context Free Parser for Chinese Grammar (Python | Haskell | LaTex)

Aug, 2022 - Dec, 2022

Collaborated with my teammate, Anh Nhat (Daisy) Huynh, and thesis advisor, Dr. Paul-André Melliès, on a theoretical work on parsing algorithms, a very advance topic for undergraduate students.

- Authored most of the written reports and the literature review that were required by the reviewers.
- Proved completeness for the Earley Parser algorithm, a challenging proof.
- Verified that the toy Earley Parser coded by Huynh obtained the theoretical best-case run time of O(n) for certain inputs.

# A Sketch of A Pandemic (JavaScript | D3.js)

Aug, 2020 - Dec, 2020

Created an interactive webpage that contextualized the spread of the pandemic in the USA in a global setting, a project that was within the top percentile of submitted works on **information visualization**.

- Researched credible information sources on Our World In Data and Kaggle for the project.
- Coded up interactive and accurate views for displaying COVID cases and mortality for 228 countries in the form of treemap and bar charts that balance expressiveness with accuracy.
- Devised a solution to show the time evolution of the pandemic across the USA from Jan, 2020 to Dec, 2020 in the form of a choropleth map.

## **TECHNICAL SKILLS**

Languages: Python, C, C++, Haskell, JavaScript, SQL

Framework & Tools & Others: Django, D3.js, LaTex, Pandas, NumPy, Matplotlib, HTML, CSS

# **English Language Partnership With Ukranian Refugees**

Apr, 2024 - Present

## New York University Alumni Program

Conducting conversation sessions with a Ukrainian refugee to help them develop their conversational skills in English as part-time volunteer work.

# <u>Undecidability</u>, <u>Uncomputability</u>, <u>and Unpredictability</u> Essay Contest

Apr, 2020

## Foundational Questions Institute

Co-authored a well rated for an essay competition on the topic of intersection of Gödel's incompleteness theorems, the halting problem, and unpredictability in quantum mechanics that primarily drew scientists, philosophers, PhD students and other such individuals.

### **LANGUAGES**

English, IELTS Overall Band Score of 8.0 | Farsi/Persian, Conversational | Bangla, Conversational | Mandarin, Limited