

Raiyan Reza

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EDUCATION

New York University, NYU Shanghai, Shanghai, China

May, 2023

Bachelor of Science, Computer Science, GPA: 3.3

Relevant Coursework: Software Engineering, Functional Programming, Information Visualization

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Haskell

Operating Systems: Windows, Linux

Other Tools: Django, D3 Library of JavaScript, LaTeX, Pandas, Numpy, Matplotlib, Shyft, HTML, CSS

EXPERIENCE

Short-Term Data Analytics Project(Python, Shyft, Pandas):

12th Dec, 2023 - 25th Dec, 2023

Client Information: Confidential; Client Works At A Major Energy Company In Europe

- Devised a solution for collecting and compiling hydrological model and observation data from Shyft TimeSeries to a Panda framework in the very limited time given by the client.
- Programmed a Python module that can collect data in a Panda framework for statistical analysis, for example computing Nash-Sutcliffe measures between observation data and hydrological model data.

Private Tutoring in Introductory Programming (Python, LaTeX):

6th Jun, 2022 - 12th Aug, 2022

Client Information: Student at International University of Bangladesh; Dhaka, Bangladesh

- Built a highly individualized curriculum tailored to the client's strengths and weaknesses.
- Carefully curated and wrote questions typeset in Latex with clear emphasis on algorithmic thinking for regular classwork, quizzes, and tests to create an active learning environment.
- Reported to my student's guardians with detailed progress reports commenting on the student's progress, performance, and other necessary information.
- Client obtained one of the highest grades in their university course.

PROJECTS

Personal Website (HTML, CSS, JavaScript)

Jan, 2024

- Identified an appropriate template for a professional portfolio page.
- Programmed necessary and meaningful modifications to the template to effectively communicate education, experience, and skills and showcase personal projects.
- Deployed a fully functional lightweight web page with modern UI/UX standards and conventions.

Prototyping A Toy Context Free Parser for Chinese Grammar (Python, Haskell)

Aug, 2022 - Dec, 2022

- Communicated with my teammate, Anh Nhat (Daisy) Huynh, and thesis advisor, Professor Paul-André Melliès, across different time zones during regular scheduled meetings.
- Authored most of the written reports and the literature review that were required by the reviewers.
- Calculated performance of the toy Earley Parser programmed by my teammate for specific inputs to collect the necessary empirical evidence verifying the algorithm had the best-case run time of $O(n)$ for certain inputs as predicted by theory.
- Gave asynchronous presentations to the reviewers with my teammate.

Qalb+: A HealthCare Web Application Prototype (Django)

Aug, 2022 - Dec, 2022

- Collaborated with my team on brainstorming ideas for the intended project.
- Established the project's name, Qalb+.
- Wrote some of the key documentation required for the project.
- Designed the class diagram and one of the sequence diagrams that would guide the project.
- Built the feature for uploading files to the web application prototype.

A Sketch of A Pandemic: Information Visualization of COVID in USA (D3 Library of JavaScript)

Aug, 2020 - Dec, 2020

- Collected data from credible information sources and filtered some of the data on Excel to produce the project dataset.
- Programmed an interactive treemap coupled with a bar chart for 228 countries to convey a global picture of COVID-19 cases and mortality by facilitating comparison between countries.
- Programmed a time series choropleth map of the USA for Jan, 2020 - Dec, 2020, with each state showing their own time evolution of COVID-19 cases and mortality in the form of line charts.
- Generated a webpage that contextualized the spread of the pandemic in the USA in a global setting.

LANGUAGES

- English (IELTS Academic: Speaking, 8.5; Listening, 8.5; Reading, 8.5; Writing, 7.5; Total, 8.0), Persian (Conversational), Bangla (Conversational), Mandarin (Limited).

INTERESTS

- Sci-fi & Fantasy Novels, Video Games, Chess, Programming, Physics, Writing, Aviation Industry, History of Science