

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, Data Structures, Basic Algorithms,

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, Matplotlib):

12th Dec, 2023 - 25th Dec, 2023

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

- Collaborated with an expert in the energy production field on benchmarking hydrological models.
- Devised a module for collecting hydrological data from Shyft TimeSeries to a Pandas DataFrame in a strict deadline.
- Organized the data properly in Pandas for statistical analysis (e.g: Nash–Sutcliffe efficiency) and graphing information.
- 8759 data points could be processed in a matter of few seconds, thus, for the Shyft package data the solution was practical.

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.
- Selected and designed questions to hone algorithmic thinking and conceptual understanding.
- Regularly assigned classworks and quizzes and gave lively lectures to nurture an active learning environment.
- Reported to my student's guardians with detailed written progress reports on the student's performance.
- Typeset all assignments, quizzes, homeworks, and progress reports in LaTeX for professional presentation.
- Client obtained one of the highest grades in their university course.

PROJECTS

[My Personal Website](#) (HTML, CSS, JavaScript)

Jan, 2024

Deployed a fully functional lightweight web page with modern UI/UX standards and conventions.

- Identified an appropriate template for a professional portfolio page.
- Programmed substantial modifications to the template for effective communication of education, experiences, and skills.

[Prototyping A Toy Context Free Parser for Chinese Grammar](#) (Python, Haskell, LaTeX)

Aug, 2022 - Dec, 2022

Collaborated with my teammate, Anh Nhat (Daisy) Huynh, and thesis advisor, Professor Paul-André Melliès on parsing algorithms.

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

[Qalb+: A HealthCare Web Application Prototype For United Arab Emirates](#) (Django)

Aug, 2022 - Dec, 2022

Collaborated with my team of four on all stages of building a web application prototype letting patients meet doctors online.

- Established the project's name, Qalb+.
- Designed the class diagram and one of the sequence diagrams that guided the project.
- Built the feature letting doctors and patients upload static files (reports, lab tests, etc) to the web application prototype.

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

Aug, 2020 - Dec, 2020

Created an interactive webpage that contextualized the spread of the pandemic in the USA in a global setting.

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

ACTIVITIES

[Undecidability, Uncomputability, and Unpredictability Essay Contest](#)

April, 2020

Foundational Questions Institute.

- Competing against mostly research scientists, co-authored a well rated essay on the intersection of Gödel's incompleteness theorems, the halting problem, and unpredictability in quantum mechanics.

LANGUAGES

English, *IETLS Academic Band Score of 8.0* • Persian, *Conversational* • Bangla, *Conversational* • Mandarin, *Limited*