Raiyan Reza

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Education

New York University, NYU Shanghai, Shanghai, China May, 2023
Bachelor of Science, Computer Science, GPA: 3.3 / 4.0
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.
- Programmed methods for statistical analysis (e.g: Nash–Sutcliffe efficiency) and graphing information in a strict deadline.
- Verified that the statistical analysis and graphing was time feasible: 8759 data points processed in 0.62 +/- 0.07 s in the working dataset, indicative of scalability for a dataset 1000 times larger.

Private Tutoring, 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.
- Designed questions to hone algorithmic thinking and conceptual understanding.
- Created an active learning environment by lively lectures, regular class discussions, quizzes, and assignments.
- 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 - Present
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.

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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, lat 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 physicists, engineers, philosophers and other such professionals, co-authored a well rated essay on the topic of 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