Shaima Hussaini

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United States Citizen | Albany, NY

EDUCATION

University at Albany — Aug. 2021 – May 2024
B.S. in Computer Science, Minor in Statistics — *Albany, NY*
GPA: 4.0

TECHNICAL SKILLS

Proficient: Java, Python, C
Familiar: HTML, CSS, JavaScript, R, Bash
Tools: Git, Linux, Visual Studio Code, Eclipse, PyCharm, Jupyter Notebook, RStudio
Libraries: NumPy, Scikit-Learn, Pandas, Apache POI

EXPERIENCE

Fellow in RNA Institute's Bioinformatics Program — June 2022 – Aug. 2022
Research Foundation of SUNY – RNA Institute — *Albany, NY*
- Analyzed RNA sequences with chemical reactivity data and developed a pipeline to accurately model RNA secondary structures.
- Analyzed large data sets of biological data and gene sequences using R to perform differential and alternative splicing gene expression analysis.
- Presented at the RNA Institute's Summer Symposium and won Best Poster Presentation Award.

Undergraduate Research Assistant — May 2022 – Aug. 2022
Research Foundation of SUNY – RNA Institute — *Albany, NY*
- Developed a Java program with a Swing GUI to analyze mass spectrometry data for RNA modifications.
- Worked with other labs to customize the program to fit their research needs.

Volunteer Tutor and Publicity Manager — Jan. 2018 – June 2021
Academic Resource Center – Niskayuna High School — *Schenectady, NY*
- Publicized center to students and teachers, recruited new tutors, and tutored peers in math and science subjects.

PROJECTS

MassSpecAnalysis | *Java, Java Swing GUI, Apache POI* — May 2022 – Aug. 2022
- Developed a Java program that compares data generated from mass spectrometry experiments to the lab's database with various parameters set by the user from a GUI.
- Used Apache POI to export analysis as an Excel file.
- Developed a feature to edit the database directly from the GUI.

Book Recommendations | *Python, NumPy, Scikit-Learn, Pandas* — Aug. 2022 – Present
- Built a system that makes book recommendations to the user based on their liked books using data scraped from Goodreads.
- Built a search engine to search the data set for books using TF-IDF and cosine similarity.

Interpreter | *Java* — Sep. 2022 – Present
- Built an interpreter for Shank, a language developed by my professor.
- Developed a lexer that generates tokens using a state machine.
- Developed a parser that processes the tokens and returns an abstract syntax tree.

Web Portfolio | *HTML, CSS, JavaScript* | shaima-h.github.io — Sep. 2022 – Present
- My responsive, personal website to showcase myself and my projects.