

Harshul Agarwal

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EDUCATION

Northeastern University, MA | *B.S. Computer Science* | May 2027 **Cumulative GPA:** 3.81/4.00

Courses: CS 2510 - Fundamentals of Computer Science I& II (A) | MATH 2321 – Calculus 3 for Sci/Engr (A) | CS3000 – Algorithms & Data Structures (IP) | ACCT1201 – Financial Accounting (IP)

Societies: Northeastern Finance and Investment Society, Northeastern Young Entrepreneurship Society

PROFESSIONAL EXPERIENCE

Northeastern University | Boston, MA Sep 2024 – Present

Research Assistant

- In collaboration with esteemed Professor Yakov Bart and Professor Samsun Knight from University of Toronto, to design and implement mass robust web scraping solutions using Python libraries such as Beautiful-Soup and Scrapy, leveraging high-performance computing resources for efficient data collection from diverse online sources.
- Conducted comprehensive data analysis and applied intermediate machine learning techniques, such as decision trees and support vector machines, using Python tools like Scikit-learn, utilizing high-performance computing to transform raw data with over 1,000,000 data points into actionable insights that support academic research objectives.

Flomad Labs R&D | Austin, TX Feb 2024 – August 2024

Software Developer Intern

- Harnessed Java alongside the Tuareg Middleware to develop advanced Web Scraping algorithms to automate data extraction by 30%.
- Collaborated with cross-functional teams to ensure the smooth integration of the Open Weather API alongside the development of an algorithm integrated with historical data to predict likely weather scenarios by 25%.
- Further integrated the Amadeus Developer API to create an efficient flight booking portal with 20% faster load speeds and booking efficiency

R.A. Gems Hong Kong Co Ltd | Hong Kong May 2023 – August 2023

Information and Technology Sales Manager

- Designed and developed a robust website that leveraged PHP, JavaScript and more to incorporate asynchronous requests, event-driven programming, and DOM manipulation to create a modern responsive and feature-rich website.
- Successfully developed relationships with high-profile luxury brands, including top-tier jewelry companies.

PROJECTS

Amazon Review Scraper July 2024

- Developed an Amazon web scraper to efficiently extract and compile customer reviews for products over multiple pages, further inserted into a spreadsheet while avoiding scraping blockers
- Technical Implementations: Python – Request, Beautiful Soup, Extractor, Pandas, Parser, PyCharm

Data Analytics Pipeline July 2024

- Designed a Python program that preprocess given data from Kullback-Leibler divergence to analyze the impact of information revelation on the popularity of English-language fiction books
- Technical Implementations: Python – Pandas, NumPy, Scipy.stats, sklearn, PyCharm

Weather Application Feb 2024 – Mar 2024

- Designed and created a website using technical implementations to connect to the Open Weather API to obtain live up-to-date information for any city around the world.
- Technical Implementations: HTML, CSS, JavaScript, Visual Studio Code Related to *Flomad Labs*

Fitness Tracker Application Sep 2022 – Dec 2022

- A calorie tracker application that efficiently monitors and records daily food intake and physical activity, providing users with real-time insights and personalized recommendations to support their health and fitness goals.
- Technical Implementations: Java, JavaFx, IntelliJ, SQL, IntelliJ IDEA CE

SKILLS & INTERESTS

Languages: English (Native), Hindi (Native), Mandarin Chinese (Professional Proficiency)

Honors & Awards: Senior UKMT Challenge (Bronze) | AIME Qualifier | AMC12B (91.5/150, 93rd Percentile)

Programming: Java, Python (NumPy, Pandas, sklearn), Kotlin, HTML, CSS, JavaScript, SQL

Developer Tools & Technologies: VSC, PyCharm, IntelliJ, Eclipse, Scene Builder, Git, Tuareg, MySQL Workbench

Interests: Soccer, Formula One, Gym, 8 ball pool, Snooker, *Billions*