

INBAR OFER

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EDUCATION

Candidate for BS, Computer Science and Behavioral Neuroscience (Minor: Ethics)

Aug. 2019 - Dec. 2023

Northeastern University, Khoury College of Computer Sciences, Honors Program

GPA: 3.94/4.0

Special Achievements: Honors Early Research Award (Molecular Biology) 2019, Dean's List, President's Award,

Nu Rho Psi Honors Society, PEAK Base Camp Award 2023

Course Highlights: Algorithms and Data, Object-Oriented Design, Database Design, Computer Systems

PROJECTS

Animation Generator (*Code repository available upon request.*)

- Developed a Java program using the Model-View-Controller (MVC) design pattern to create, visualize, and export animations
- Implemented a clean and user-friendly GUI that enables users to control the animation and export it to various file formats
- Ensured the proper functionality of the program through extensive and robust JUnit tests, covering various use cases and edge cases

Office Hours Notification System (*View Apps script [here.](#)*)

- Enhanced ease of use of TA request system which relied on manual viewing of spreadsheet to process requests
- Wrote a JavaScript script that automatically tracks activity on the course's Google spreadsheet, detecting student help requests and sending text notifications to TAs during their shift

Data Science in Health Care (*View Jupyter notebook [here.](#)*)

- Analyzed the relationship between physicians per capita and patient outcomes
- Utilized Python to clean, standardize, and organize data from multiple sources, ensuring high quality and consistency across datasets
- Performed statistical analyses and generated informative data visualizations using Matplotlib, NumPy, and scikit-learn

Vaccine Distribution System (*View Github repository and project report [here.](#)*)

- Developed a tool that models the flow of COVID-19 vaccines through various distribution channels and allows for several user types, including citizen and clinic administrator, utilizing a SQL database for back-end organization and Java code for front-end interaction

EXPERIENCE

Teaching Assistant/Fellow (TA)

Sep. 2020 - Present

Northeastern University

- Fundamentals of Computer Science II & Object-Oriented Design
 - Coach 100+ students on class material and best practices for solving homework problems during 1-on-1 office hours
 - Provide constructive feedback on Java homework assignments to track students' progress
- Organic Chemistry I
 - Devise original weekly recitation lesson plans based on important concepts from lecture
 - Review key ideas and guide 200+ students through practice problems on Zoom recitations

Volunteer Research Assistant

Oct. 2019 - Present

Chai Lab

- Develop and optimize a detection method for GHB, a recreational and date rape drug, using two enzymes obtained by PCR and expressed in *E. coli* under the supervision of Dr. Yunrong Chai
- Build a computational platform in Python to identify bacterial enzymes that break down psychoactive drugs
 - Extract and processing data from the Protein Data Bank (PDB) API
 - Predict binding affinity between the drug and bacterial enzymes using DeepDTAF

Data Engineering Co-op (Full Time)

Jun. 2021 - Dec. 2021

FogPharma

- Built applications using R Shiny to display and analyze quantitative biological and chemical data, improving scientist workflows
- Designed and implemented guided tour and tooltips plugin for internal enterprise search in Javascript using Shepherd.js, streamlining onboarding for the new platform
- Enabled maintenance of internal app preferences across devices and browsers using Vuex and ElasticSearch
- Designed and implemented scalable and secure cloud-based solutions using AWS services such as EC2 and S3, enabling efficient and reliable processing and storage of data

TECHNICAL PROFICIENCIES

Programming Languages & OS: Java, Racket, Unix, Kotlin, Python, HTML, SQL, C, Assembly, JavaScript, R

Software: Git, LaTeX, Adobe Creative Suite (XD, Photoshop, Illustrator, Lightroom), Android Studio, Google Colab