Utkarshna Sinha

(905)-361-1632 | sinha.ut@northeastern.edu
www.linkedin.com/in/utkarshnas | sinhaut.github.io

EDUCATION

Northeastern University Sep 2019 – Dec 2021
Master of Science in Computer Science, cGPA: 3.75/4.0 Boston, MA
Courses: Computer Systems (A), AI (A), Algorithms (A-), Database Management
Awards: Scholarship Recipient for GHC 2020 & WiT Regatta 2020
Activities: Peer-mentor and organizer of weekly CS social events

University of Toronto Sep 2014 – Jun 2018
Honors Bachelor of Science, Human Biology & Psychology Toronto, ON
Awards: Gordon Cressy Award; Father Robert Madden Award; Dean's List
Activities: Dragonboat Team Captain, Journalist for the Varsity, Biomod Team President

TECHNICAL KNOWLEDGE

Languages	Python, Java, C++, C, Bash, C#
Tools	Linux, Git, MySQL, VSCode, IntelliJ, Jupyter Notebooks, Unity3D

PROJECTS

Pacman AI Project Sep 2020 – Dec 2020
Northeastern University Boston, MA
- Implemented AI search algorithms in **Python** to solve Pacman simulations including DFS, BFS, A*, UCS, minimax, expectimax, alpha-beta pruning with evaluation heuristics
- Built reinforcement learning algorithms for Pacman including value iteration, Q-learning, and particle filtering

Multithreaded Networked Database Server Sep 2020 – Dec 2020
Northeastern University Boston, MA
- Built a database server in **C** with a single network listener thread and multiple threads to store data in files
- Created a server to handle read, write or delete requests from a network for individual files in the database

Declarative Animation Software Jan 2020 – Apr 2020
Northeastern University Boston, MA
- Designed and implemented software end-to-end to draw shapes, and transitions, given SVG, or natural language inputs with flexible playback inputs
- Developed using the Model-View-Controller architecture and applied object oriented programming principles in **Java** with graphics implemented using the **Java Swing UI Framework**

Biomedical Engineering Capstone Design Project Sep 2017 – Apr 2018
University of Toronto Toronto, ON
- Prototyped a 3D printed electronic medical device (spirometer) integrated with an **Android** app and game
- Added a game and graphics using **Unity3D**, **Python**, and **C#**
- Coordinated with healthcare providers to asses user needs, define project scope, track milestones

WORK EXPERIENCE

Graduate Teaching Assistant Jan 2020 – Dec 2020
Northeastern University Boston, MA
- Lead office hours, 1-1 tutoring sessions, and recitations to answer questions for fundamental **Python** course
- Designed automated test suites for comprehensive evaluation of programming assignments
- Evaluate programming assignments and exams, and provide feedback on accuracy, style, and documentation

Research Student in Synthetic Biology and Microbiology Labs Sep 2015 – Apr 2017
University of Toronto Toronto, ON
- Conducted science research resulting in **two written theses**, **ten poster and oral presentations** at conferences, and **two peer-reviewed publications** - International J of Antimicrobial Agents & American J of Physiology
- Awarded David S. Bruce Abstract Award at the international Experimental Biology Conference
- Studied sex-differences in lung disease, antibiotic resistance to drugs, and synthetic biology for virus detection