**Daniel Hyunjae Lee**

Phone: 425.623.5883 Email: hl743@cornell.edu

Website: 223daniel.github.io

EDUCATION

**Cornell University College of Arts and Sciences, Ithaca, NY; GPA: 3.68 Expected May 2021**

Bachelor of Arts, Double Major in Computer Science and Mathematics; Dean’s List

* Fall 2020: CS 4410: Operating Systems; MATH 4310: Linear Algebra
* Spring 2020: CS 3410: Systems Programming and Computer Architecture; CS 4220: Numerical Analysis; Math 4710: Probability; CS 4850: Mathematics for the Information Age
* Fall 2019: CS 4780: Machine Learning (Supervised), CS 4810: Theory of Computation; Math 3320: Number Theory
* Spring 2019: CS 3110: Functional Programming; CS 4820 Analysis of Algorithms; Math 2220: Multivariable Calculus
* Fall 2018: CS 2112: Honors OO Design & Data Structures; CS 2800: Discrete Math; Math 2210: Linear Algebra

EXPERIENCE

**Kurvv, Bellevue, WA July 2019— Aug. 2020**

Software Intern

* Developed codebase for pipelining and company infrastructure for a startup providing data science as a service; worked on developing the code generator, Azure interface, and several payment interfaces including Stripe using C# and .NET
* Extensive testing of website frontend for client, data scientist, project manager, and admin accounts for issues, bugs, and other areas of improvement; Documented issues and tracked progress of improvements

**Cellfie, Bellevue, WA May 2020—Aug. 2020**

Software Summer Intern

* Frontend UX design and implementation, Android mobile application for mobile Visa Tap 2 Phone EMV payment terminal

**Cornell University Computer Science Department, Ithaca, NY Aug 2019—Present**

Teaching Assistant, CS 4780: Machine Learning for Intelligent Systems

* Leading sections for Supervised ML, Fall 2020 semester

Teaching Assistant, CS 2112: Honors Java—Object Oriented Design & Data Structures

* Course staff responsible for debugging and grading 7 assignments (including implementations of RSA, hashtables, bloom filters, and server-client interactions), holding office hours, holding lab sessions, and grading exams
* Responsible for introducing Git, version control, design patterns, regular expressions, graph theory, and other essential concepts to entry-level CS students

**University of Washington Applied Physics Lab and Department of Gastroenterology, Seattle, WA Sept. 2017—June 2018**

Research Intern

* Research w Prof. Tatiana Khokhlova in HIFU for pancreatic/liver cancer, disrupting blood clots, and breaking kidney stones
* Developed scripts in MATLAB to interface with lab equipment, e.g. oscilloscope, hydrophone, amplifier
* Implemented categorizer for treatment results on lab mice with optimization and image analysis toolboxes

**Private Tutor, Bellevue, WA 2017—Present**

* Over 200 hours of tutoring middle and high school students in topics such as Calculus, AP CS, and Olympiad math

PROJECTS

**Shape Classification**

* Designed and trained a neural network to categorize simple shapes using Image Analysis Toolbox and Optimization Toolbox in MATLAB. Analyzed accuracies of networks trained using different image analysis algorithms

**Critter World**

* Created a simulation with “critter” characters, each with different instructions, mutations, and characteristics
* Implemented different front ends, including direct print to console, GUI using JavaFX, and a client using HTTP
* Parsing, storing, and interpreting instructions using grammar parsing and abstract syntax trees

**VisiCalc**

* Designed and implemented a replica of the very first commercial spreadsheet program for personal computers
* Used object-oriented design to implement functionalities of a spreadsheet and created a terminal interface for testing

**Videogame intelligence**

* Programmed intelligence for Pacman characters (Pacman, Inky, Blinky, Pinky, and Clyde) using pathfinding algorithms
* Programmed intelligence for battleships in a 2D space battle simulation and interactions with other assets

AWARDS

* American Invitational Mathematics Exam (AIME) 5-time Qualifier; Score: 6, Feb. 2018; USACO Silver Medal, Dec. 2016
* National AP Scholar (Score 5: 14 tests including CS, BC Calculus, Physics C E/M, Physics C Mechanics; Score 4: 3 tests)
* Accelerated IB Diploma (1 year early)

SKILLS

* Languages: (Advanced) Java, OCaml, C#, MATLAB; (Intermediate) Python, JS; (Misc.) Bootstrap, HTML, LaTeX, JSON
* Supervised learning, OO design, functional languages, neural networks, algorithms, UI design, Agile/Jira, web design