

# Jianchen Hong

Phone: +1-217-974-4768 | Email: [Williamhong111@outlook.com](mailto:Williamhong111@outlook.com) | Address: 708 s sixth str 1304, IL, US

## EDUCATION

**University of Illinois Urbana-Champaign, Illinois, US**

January 2022 – May 2025 (Expected)

Degree: Bachelor of Science; Major: Mathematics, GPA: 3.73

**Northeastern University, Massachusetts, US**

September 2020 – May 2021

Major: Computer Science; GPA: 3.44

Overall GPA: 3.57

Core Courses: *Intro to Computer Science, Calculus, Statistics and Probability, Discrete Structures, Data Structures*

## SELECTED PROJECTS

**Core member, Open flight Project team, University of Illinois Urbana-Champaign, IL, US**

**November 2022**

**Main tools & skills:** C++

**Project background:**

Used flight routes and airports data to create a tool to help travel enthusiasts find the best way to travel. Dijkstra's Shortest Path algorithm assists in finding the shortest routes by airport while Tarjan's strongly connected component algorithm and DFS help discover a cluster of places that can be visited.

**Responsibilities:**

- Traversal: Simulated an extreme version of "Around the World in 80 Days", where users could visit each airport without repeating it.
- Shortest Path: Used Dijkstra's algorithm to find the shortest path between two airports; utilized a priority queue and followed the idea of adding and removing nodes from the priority queue based on the shortest time to traverse between the two nodes being compared.
- Landmark Routes: Created routes that include common tourist destinations; selected the airport and built the route accordingly.

**Core member, Image and Stickers Project team, University of Illinois Urbana-Champaign, IL, US**

**October 2022**

**Main tools & skills:** C++

**Project background:** Made a class to represent an image with stickers placed on it. The stickers placed on the base image might hang off any side of the base image while avoiding to cover other stickers.

**Responsibilities:**

- Located everything relative to the base Image since the base Image is on an infinite canvas
- Maintained an array of pointers to Image objects to store the stickers. Each Image in the Sticker Sheet had an index, an x-coordinate, and a y-coordinate.

**Core members, DNA Database, University of Illinois Urbana-Champaign, IL, US**

**May 2022**

**Main tools & skills:** Java

**Project background:** Determined DNA affiliation given the name of a DNA database file and a string representation of the DNA sequence.

**Responsibilities:**

- Accumulated experience by iterating compound data structures and made decisions based on observed values
- Enriched experience with simple string parsing and basic string manipulation techniques
- Practiced with simple string parsing and basic input validation
- Employed reading data from a file using input Files streams
- Further developed Linux programming and shell command

**Core member, Mountain Path Project team,**

**November 2022**

**Main tools & skills:** C++

**Project background:** Converted the data sample file into the Elevation Dataset object. Built grayscale topology images based on

high -program data, draw each path on the topology image map to create paths and calculate the path and output image.

***Responsibilities:***

- Built an image by zooming in our high-journey data
- Used the RGB color model to encode the high program into gray color
- Calculated the height of the high-range data set\_wharine number, and finally drew each path on the topology image map to create paths and calculate the path and the final output image

**Core member, Connect 4, University of Illinois Urbana-Champaign, IL, US**

**May 2022**

***Main tools & skills:*** JAVA

***Project background:*** Built the game Connect 4 and 4 automated models to win the game.

***Responsibilities:***

- Worked on a team development project; tasked with implementing the game Connect 4.
- Implemented a subset of functionality required for gameplay.

**ADDITIONAL INFORMATION**

**Languages:**

Mandarin (Native); English (TOEFL grades)

**Technical skills:**

Proficient in JAVA, C++, logic, r studio

**Interest:**

- Organized several skate games in our school.
- Joined the hip-hop club, delicate the singing part, and use Logic to record and mix music for my team.
- Organized a show at a club for my friend.