

Xiaohan Liu

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EDUCATION

Syracuse University, Syracuse, NY 08/2019-05/2021

- **M.S. Computer Science**
- **Courses:** Advanced Computer Architecture, Structured Programming and Formal Method, Data Structure and C++ Programming, Principles of Operating System, Design and Analysis of Algorithm, Introduction to Database Management System

Tianjin University, Tianjin, China 09/2015-07/2019

- **B.S. Applied Chemistry**
- **Award:** Tianjin University Merit Student 2016 & 2017
- **Courses:** Fundamentals of Computer Software, Fundamentals of Computer Hardware, Technology of Multimedia Application, Algorithm Toolbox (Coursera), Discrete Mathematics (Coursera)

Israel Institute of Technology, Haifa, Israel 08/2018

- **Award:** Full Scholarship Summer School Student in Engineering and Science
- **Course:** Introduction to Machine Learning

EXPERIENCE

Beijing PipePlus Technology Co., Ltd. Beijing, China
C/C++ Programming Intern 07/2018

- Wrote program to call the NoSQL database API functions, realized reading tags and writing tags and viewing historical trends functions, by learning the NoSQL database API interface call
- Utilized Matrikon OPC simulation server to generate random industrial data, used program written before to connect the Matrikon OPC simulation server with the NoSQL database, tested the program functions
- Converted the program to an OPC client, by the API interface call of Matrikon, which read the data generated by Matrikon OPC and store it in NoSQL database

PROJECTS

The Web Developer Bootcamp Full-Stack JS Application Udemy
Course Final Project, Supervisor: Prof. Colt Steele 5/2020-7/2020

- Create static HTML and CSS portfile sites and landing pages. Manipulate DOM with JS, JQuery
- Establish a complicated yelp-like application YelpCamp from scratch using NodeJS, NPM
- Install npm packages Express and axios to deal with RESTful full stack structure, HTTP request and third-party APIs. Use NoSQL database MongoDB and npm package Mongoose to manage data

Simulation of Game Flappy bird Syracuse University
Course Final Project, Supervisor: Prof. Joseph Wacławski 11/2019-12/2018

- Using what user input (w,s) to control the bird to dodge to barriers and when collision happened game over and display how much barriers have been dodged
- Composited the class "FilledShape" given by professor which can display several shapes in a new window, constructing abstract class GameObject and public inherited to particular game objects like barriers, birds and background.
- Utilized polymorphism to "Draw" separately barriers, birds etc. Judging collision and the condition of game over by operator overloading "==" to decide if the birds dodge the barriers or not validation

Computer Simulation of Polymer Chain Conformation Tianjin University
Research Project, Supervisor: Prof. Xuehao He 03/2018-06/2018

- Programmed to generate gro file to construct the block polymer chain model, observed the initial morphology of polymer chains in the solvent with different corresponding parameters
- Set simulation parameters with open source molecule simulation software GROMACS, acquired returned value then analyzed return value, visualized it by VMD, determined the final morphology

TECHNICAL SKILLS

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- C/C++, HTML/CSS/JavaScript; NodeJS, JQuery, DOM; SQL, MongoDB; Linux