

EDUCATION

University of California, San Diego · Mathematics – Computer Science, B.S. Class of 2021 9/2017 – present

Coursework - Computer Organization | Theory of Computation | Neural network and Deep learning | Algorithms | Machine Learning | Advanced Data Structures | Econometrics

GPA: 3.85 / 4.00

GRE: 332 + 4.5 (Analytical Writing)

SKILLS

Programming Languages – Java | Python | C | C++ | C# | MATLAB | SQL | HTML | JavaScript | CSS | Swift

Software & Frameworks – Git | Unity | TensorFlow | PyTorch | Xcode | Stata

TECHNOLOGICAL ACTIVITIES & WORK EXPERIENCE

IAR Ivy League Summer Research Camp · Professor's Teaching & Researching Assistant Shanghai · 7/2018 to 8/2018

- Introduced concepts of machine learning to students with Professor Nathan Srebro from TTIC
- Designed UI for a Connect Four game, implemented AI algorithm using Minimax algorithm and Alpha-beta pruning by testing out the best move judgement based on board discs, improved win rate against normal AI to 69%
- Researched with professor on the AI tactics of Go game on finding a better choice of analyzing the situation of board
- Used my expertise in Go game to design a 9*9 AI algorithm that have a win rate over 70% against and original AI, through changing how computer measures area player occupies through counting the eye of each block

Ross Mathematics Program · Junior Counselor OSU, Columbus, OH · 6/2016 to 7/2016

- Proved advanced Number Theory theorems, guided students solve their problems and explored modern algebra
- Graded students' works, did research on group theory's applications on RSA with graduate counselor and professors

FIRST Stronghold Championship · Member of Team 5839 Edward Jones Dome, St. Louis, MO · 4/2016

- Cooperated with experts on robotics programming using WPILib tools and assembly before competition
- Ambassador of technological communication with other teams to share technologies used in Arduino kit programming
- Volunteered to record other teams' statistics, analyzed tactics in fighting against them

Elite Program · Astronomy Group Member NJU, Nanjing, China · 1/2015 to 2/2016

- Establish a mechanical model with gravitational force among three or more planets and showed stability in next 100 years
- Conducted massive number of observations at NJU astronomical observatory and wrote observation journal for each
- Communicated with professor each week and wrote a final thesis published on the program journal with selected theses

PROJECTS

2D Anime Profile Generator, LA Hacks · TensorFlow Programmer Los Angeles, CA · Mar 29 to Mar 31, 2019

- Crawled anime pictures and got head profiles using OpenCV, trained profile pictures using GAN in TensorFlow
- Generated about 30% good anime profiles after 250 epochs in limited time, applied the generator to website with Flask

PM2.5 Monitor · Designer & Programmer San Diego, CA · Jan 7 to Mar 10, 2019

- Designed PM2.5 monitor with a dust sensor, Arduino UNO and a circuit with capacitors and resistance
- Wrote the Arduino program obtaining voltage, signal value, tuned the parameters and converted them into dust density
- Recorded previous data, use machine learning to predict future dust density by weather forecast with error within 31%

IOS Image Identification App · Programmer San Diego, CA · Jan 4 to Jan 15, 2019

- Create an iOS app alone with Xcode that can detect images of different animals using Swift
- Established a 5-layer neural network, tuned the hyperparameters to get accuracy of 92% for user-input images of animals

College Life of a Programmer project, SD Hacks · Group Leader San Diego, CA · Oct 12 to Oct 14, 2018

- Led a team of four to develop a 3D Unity life simulation game with extensive UI design and VFX
- Put forward the idea of developing the simulation game, wrote most of the scripts in C#, managed level design, map design, scenes and modeling design with Blender and achieved unique effects using shader

OTHERS

Languages: Native in Mandarin, fluent in English, basic in Spanish

5D and received professional training in Go

AWARDS

NOI(National Olympiad in Informatics) – National First Award · Won the award using C++ as programming language

CMO(Chinese Mathematical Olympiad) – National First Award

CPhO(Chinese Physics Olympiad) – First Award in Jiangsu Province · Won the award twice in both 2015 and 2016

AIME – 7th Place in China Division