Junchen Zhao
junchen0518@163.com

Education

09/2014 - Present Suzhou Industrial Park Xinghai Experimental Middle School

GPA：4.0/4.0

SAT: 1450/1600 TOEFL: 107

Research Experience

1. **2017** ***Math Expectation of the Number of Suits in N Pokers***
   —Use combinatorics and computer science to analyze a random process
   —See the attached Research on Math Expectation of the Number of Suits in N Cards (Page 3-10)

2. **2017** ***Experiments and report on Enhanced Photoelectrochemical Performance in Reduced Graphene Oxide/$BiFeO_3$ Heterostructure*** **at Soochow University**
   —Perform experiment to fabricate $BiFeO_3$ heterostructure
   —Report and review the deficiencies of this experiment
   —See the attached Report and Retrospect on Experiments (Page 11-14) and Enhanced Photoelectrochemical Performance (Page 15-30)

Projects

1. **2016-2017 A Robot to Solve Rubik's Cubes**
   —Use C++ to generate solution by taking in cube state and Use Arduino to control steppers to execute solution
   —Self-design and put the robot structure and components together
   —Solve a Rubik's Cube in 5 seconds
   —See the video demo at https://m.weibo.cn/status/4169240011431230
   —View the code at https://github.com/g20150120/cubot
   —Visit http://www.arduino.cn/thread-67277-1-1.html for more information

2. **2017 Personal Website htt**p**://alexanderzhao.info**
   —Showcase an online presence of my own
   —full-stack developing done 100% on my own
   —web games at http://alexanderzhao.info/warplane and http://alexanderzhao.info/poker
   —view code at https://github.com/g20150120/poker

3. **2017 Pocket College**
   —Build a platform for students applying US colleges to share experiences and information
   —View the code at https://github.com/g20150120/pocketcollege

4. **2017 Weibo Spide**r
   —Design a web crawler to do data mining in the most popular social media in China
   —Increase efficiency by at least 1400% with the creative code
   —View the code at https://github.com/g20150120/weibospider

5. **2017 Smart Classroom System**
   —Code the program and combine the components in an innovation competition
   —Design the system that regulates temperature and humidity by controlling fans and ACs connected to sensors and clean blackboard automatically

6. **2016 iOS9 Development**
   —Program and implement applications to present texts, images, and videos for iPhone
   —Perform function to change background and text colors

Summer Program

1. **2017 Stanford Pre-Collegiate Studies**
   —Study the fundamentals of *Web Technologies*, including both front end (HTML, Javascript, and CSS) and back end (Node with Express and MongoDB).
   —Build an online platform to assist applicants in their American College applications

2. **2017 Harvard Summit for Young Leaders in China**
   —Receive rigorous training in scholarship, entrepreneurship, leadership and citizenship via taking courses: Practical Electronics,The Mosaic of Self and Struggle, Introduction to Privacy & Technology, Randomness in Science and Literature, China Thinks Big
   —Get GPA 3.82/4.0

3. **2016 Olympiad in Informatics Summer Camp**
   —Enrich the knowledge about the algorithms and data structures
   —Win the Third Prize in Jiangsu (Provincial)

Honors and Awards

1. Online Physics Brawl: Top 180 teams worldwide (International)
2. Geography and Technology Competition: Second Prize (National)
3. Electrical Engineers Recognition for Teenagers: First Prize in Jiangsu (Provincial)
4. Junior High School Mathematics and Culture Festival: First Prize in Jiangsu (Provincial)
5. Olympiad of Informatics: Third Prize in Jiangsu (Provincial)
6. Olympiad of Chemistry: Second Prize in Suzhou (Municipal)
7. China Youth Business League Suzhou Regional: Fifth Place Team (Municipal)

Computer Skills

1. C++ with STL: used in algorithm and data structure competition and basic needs
2. Python: used in web crawler development and simple data or image analysis
3. Node with Express, jade, and MongoDB: used in web server to handle requests and so on
4. HTML, Javascript, and CSS: used in webpage development
5. Swift: used in iOS development
6. Mathematica: used in math calculation, plotting and so on.
7. C: used to control single chip computers

Sports

1. Basketball (starts at 12): made Grade Team in sophomore year and junior year
2. Frisbee (starts at 16): proficient in backhand, forehand; good at chasing and catching
3. Swimming (starts at 11): free stroke (Personal Best: 50m in 42s) and breast stroke
4. Ping Pong (training between 7 and 10)
5. Sprint: 100m second, 200m third at school sports meeting
6. Board Jump: second at school sports meeting
7. Chess, Chinese Chess, and Gobang
8. Pocket Cube, Rubik's Cube (PB 25''), Rubik's Revenge (PB 2'06''), and Pyramid

Voluntary Work

1. 2016-2017 Volunteer for students' mental health in the school
2. 2016-2017 Volunteer for Suzhou Industrial Park Bo'ai School
3. 2016 Volunteer for National High School Debate League of China
4. 2015-2016 Volunteer for the school library

For more information, please visit http://alexanderzhao.info/