QINGYU SONG

Sex: Male | **DOB**: 10/24/1997 | **T:** +86 13363696085 | **E:** songqingyu_2020fall@outlook.com
Add.: 61-7, Wantaihaojing, Yuhe Road, Yunhe District, Cangzhou, Hebei, China, 061001
Github: https://github.com/kobewilliam **Blog:** http://www.kobewilliam.github.io

EDUCATION BACKGROUND

Northeastern University (NEU), China **09/2016-06/2020**

- **Expected Degree:** Bachelor of Science*;* **Major**: Software Engineering (International Class (English))
- **GPA**: 3.65/5.0

Exchange Program at UC Irvine, U.S. **09/2019-06/2020**

- Course: MEMS, Python Programming
- Carry out the project with the Professor Glenn Healey on the data scrap from the website about the MLB data and calculate the curve function's parameters by using Least-Square function
- Project: NLP
- Carry out the project with Professor Padhraic Smyth on the chat bot which can talk with users with multi-turn conversations.

Exchange Program at EISTI, France **09/2018-01/2019**

- Course: Mathematics for Computer Science; Software and Architecture; Foreign Language & HR; Engineering Science
- Learnt the knowledge of Big Data and Graph-theoretical Algorithm and improved my French competence

Exchange Program at Imperial College London, U.K. **01/2018-02/2018**

- Learnt machine learning and enhanced my English competence and communication capacities
- Complied the codes that operate a robot to write some simple Chinese characters
- Finished a business proposal that proposes to apply the robot into the industry of sugar painting and won the 2nd place

STANDARDIZED TESTS

TOEFL: 99 **10/4/2019**

GRE: 324 **11/20/2019**

INTERNSHIP EXPERIENCE

Intern, NEUEDU Group, Shenyang, China **05/2019-07/2019**

Project: Hospital Information System (HIS)

- Learnt Java internet architecture and familiarized with MyBatis, MVC, spring and other framework better
- Applied vue.js and node.js in webpage front-end and applied SpringBoot to finish the back-end of the system
- Adopted MyBatis to control the MySQL database processing
- Built a HIS with a separate front-end and back-end system

RELEVANT PAPER

Jianzhe Zhao, Qingyu Song, and Guangwei Lei, *An Energy-aware Routing Mechanism based on MBOA for Data Center Network*, ICIST, 10.1109/ICIST.2019.8836768

PROJECT EXPERIENCE

Seismic Wave Detection **03/2019-Present**

Introduction: This project is achieved based on TensorFlow framework and aims to detect the existence of seismic wave from 1-D spectrum graphics. And the results of other known methods for detecting time sequence and the results obtained from different data sets will be compared to draw a conclusion.

- Applied DenseNet (ResNet-based) neural network structure based on Faster-RCNN for object detection
- Utilized the Sparse Convolution method of Atrous Convolution to expand the receptive field of convolution kernel

Intelligent Driving Technology—Yolo V3 Object Detection **01/2019-03/2019**

Introduction: This project is achieved based on Keras framework and aims to recognize the optical characters.

- Used OpenCV to finish the data pre-processing, including image angle adjusting, image rotation and image cutting
- Applied Yolo V3 algorithm for object detection
- Classified the charters with the CRNN (CNN+LSTM) neural network results

Scenic Spot Management System **07/2018**

Introduction: This project aims to build a system for two objects: tourist and administrator. And it provides corresponding

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functions for different users.

- ✧ Applied Java for programming and Dijkstra's algorithm, TSP algorithm, backtracking algorithm and KMP looing-up algorithm for tackling specific problem
- ✧ Designed the user interface with JSP, JS and CSS and used Canvas for site update and simulation
- ✧ Dealt with different elements with suitable data structure, including stack, queue, list, map etc.

Design & Implementation of Auto Scoring System for Short Answer Questions Based on Machine Learning **07/2018**

- ✧ Converted the hand-written answers into digital data able to be processed and analyzed by machine with the image recognition technology based on LSTM neural network model
- ✧ Obtained key words from long sentences through word vector model and RNN based on short-sentence marked data
- ✧ Compared the LSTM model and Word2Vec model and referred to similarity to calculate students' score
- ✧ Built and updated the words base through combining machine learning and manual means

PROFESSIONAL CONTESTS

Member, Tencent WeChat Applet Application Development Contest **05/2019**

The Title and Introduction of Our Product: UU-Words (a private English-word instructor) offers customers a platform to choose suitable English words books for recitation and review to increase their English vocabulary.

- ✧ Compiled the back-end codes of update module, time acquirement module and setting module
- ✧ Learnt the GitHub and NoSQL database and put them into practice
- ✧ Took charge of the overall environment building and the back-end initial building of words recitation module
- ✧ Finished the User Operation Guidance document

Member, China Undergraduate Mathematical Contest in Modeling (CUMCM) **09//2018**

Title: The Dynamic Scheduling Strategy for Intelligent RGV

- ✧ Applied the reinforcement learning method to find out the dynamic scheduling model and solution algorithm

Core Member, Student's Platform for Innovation and Entrepreneurship Training Program **2015-2017**

Title: The Application of Deep Learning in Breast Cancer Identification

- ✧ Conducted data pre-processing (image denoising, image intensification and image cutting) to expand the datasets
- ✧ Adjusted the neural network framework; tested and updated the features of cancer cell to enhance the accuracy

EXTRACURRICULAR ACTIVITIES

Office Director, Students' Union of College of Software Engineering **05/2017-05/2018**

- ✧ Organized the New Year's Day party and Sports Meeting of NEU; reinforced organization skills and leadership

Organization Commissary, Software Engineering Class 1601 **2016-2018**

Captain, Basketball Team of College of Software Engineering **10/2016**

- ✧ Led members to win the Champion of the "Welcome New Students Cup" Competition

AWARDS & HONORS

The 2nd Scholarship, NEU 11/2019

The 1st Prize, Tencent WeChat Applet Application Development Contest, Northeastern Region 05/2019

Elite League Cadres, NEU 12/2018

The 3rd Provincial Prize in the China Undergraduate Mathematical Contest in Modeling (CUMCM) 09/2018

The "Dark Horse" Scholarship, NEU 06/2018

The 1st Prize in "Cyb-bot" 2018 National College Student Smart Internet Innovation Application Design Contest, Northeastern Region 05/2018

The 3rd Prize in the National English Competition for College Students (NECCS) 05/2017&05/2018

The Best Concept Award, Imperial College London 02/2018

Excellent Individual Performance in the Social Practice Activity 12/2017

The 3rd Scholarship, NEU 09/2017

SKILLS AND INTERESTS

Programming: Java, C, C++, Python and SQL

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Framework: keras and TensorFlow

Languages: French and Spanish

Others: fundamental data structures and algorithms