

RESUME

PERSONAL INFORMATION

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EDUCATIONAL BACKGROUND

09/2016—07/2020 Southern University of Science and Technology

Major: Computer Science and Engineering

GPA: 3.28/4.0 (39/157 in Recommended exemption Graduate)

Degree: Bachelor

09/2010—06/2016 Tong'an No.1 Middle School of Fujian Province

Ranking: Top 1% in Fujian provincial College Entrance Examination

English Level: IELTS 6.0 \ CET6 496 \ CET4 548

PUBLICATIONS

Ziyuan Ye. "Air Pollutants Prediction in Shenzhen Based on ARIMA and Prophet Method", accepted by **2019 4th International Conference on Renewable Energy and Environmental Protection (ICREEP)**, October. 2019.

PROJECTS

05/2019--09/2019 Air Quality Prediction Based on ARIMA and Prophet Method in Shenzhen

- Analyzed the influence of spatial factors and sequential factors on air quality prediction;
- Utilized fbprophet and ARIMA time series models together with self-constructed space model;
- Achieved accuracy of 3-days air quality prediction equaling to 77.8%;
- Under the guidance of Carnegie Mellon University professor Gerald J. Wang.

06/2019--Now (In progress) Implementation of GRAPE Algorithm and Acceleration of the Algorithm Efficiency

- Analyzed quantum algorithm about GRAPE algorithm: making the shape of the output waveform closer to the ideal waveform with given number of quantum bit;
- Based on qutip frame and used sympy, scipy, Hamiltonian and other python third party packages;
- Under the guidance of Peng Cheng Laboratory professor Deng Xiuhao.

09/2018--08/2019 Court Assisted Corruption Judgement System

- Established a judgement text similarity search model and enabled users to find top ten similar verdict texts in the database based on the input verdict texts;
- Used TF-IDF to represent the Judgement text, build up keyword metric and use Word2Vec model to calculate the distance of space vector;
- High similarity in money, means and features of crimes with the given verdict texts among top ten verdict texts.
- Under the guidance of Southern University of Science and Technology professor Yao Xin.

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07/2018--02/2019 Establish Relevant Paper Search System Based on Modification of Google Page Rank Algorithm

- Modified the algorithm of Google page rank and enabled users to rank paper at their own preference ;
- Utilized the data base: MySQL+SQLAlchemy and applied the Nginx and Flask;
- Took charge of program planning, data base and algorithm involved in the program;
- Under the guidance of University of Birmingham professor He Shan and Peter Tino.

09/2018--01/2019 Design of AI Gomoku Based on Alpha and Beta Pruning Trees Algorithm

- Innovated the Global Search Method to complete the design of AI Gomoku;
- Combined the mind of Alpha and Beta Pruning trees and the minds of global search methods;
- Maintained a very high winning percentage (winning rate ranked 15th out of 145 competitors) while found the Optimal Solution Algorithm within 0.5 second saving time for competitors;
- Under the guidance of Southern University of Science and Technology professor Tang Ke and teacher Zhao Yao.

11/2018--01/2019 Optimized CARP Problem

- Hybrid Genetic Search for Arc Routing Problems. Used the path scanning greedy algorithm to do the heuristic optimization. Randomly initialized the initial population in the given time. Selected the optimal initial solution and done iterative cross validation in the set of edges;
- Based on path scanning algorithm;
- The results similar to current mainstream algorithms;
- Under the guidance of Southern University of Science and Technology professor Tang Ke and teacher Zhao Yao.

11/2018--12/2018 Classification via SVM (Support Vector Machine)

- Took responsible for the whole process and the percentage of accurate classification reached over 98% via applying the machine learning algorithm SVM to find near-optimal solution;
- Used original Pegasos & Improved Pegasos algorithms to improve data accuracy;
- Found the fact that Pegasos could not be applied to nonlinear data due to lack of suitable nonlinear space from variable mapping;
- Under the guidance of Southern University of Science and Technology professor Tang Ke and teacher Zhao Yao.

EXTRACURRICULAR ACTIVITIES

01/2018-01/2019 President of Painting and Calligraphy Club

- Held three times of Painting and calligraphy Exhibitions with totally more than 70 pieces.

HONORS & AWARDS

07/2018 National Competition hold by Communist Youth League Central Committee
The Second Prize in the Intelligent Bionics Program.

07/2018 National Competition hold by Communist Youth League Central Committee
The Third Prize in the Intelligent New Writing Program.

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05/2012--05/2015

The First Prize both in Soft Brush and Hard-Pen Calligraphy in the National Calligraphy Match.

SKILLS

- 1.Programming Languages:** Proficient in Java and Python, Familiar with C/C++, matlab and sql.
- 2.Software:** JetBrains(pycharm, DataGrip, IntelliJ), Eclipse, VScode, Atom, Sublime, Android Studio, TeXstudio.
- 3.Framework:** Maven, Git, Flask, MySQL and SQLAlchemy.

REFERRERS

1. **Xin Yao**, a Professor and the Head of Department of Computer Science and Engineering, Southern University of Science and Technology (SUSTech), Shenzhen, China.
2. **Gerald J. Wang**, a Postdoctoral Researcher in Chemical Engineering at Massachusetts Institute of Technology (MIT) and an Assistant Professor in Civil and Environmental Engineering at Carnegie Mellon University (CMU), America.
3. **Deng Xiuhao**, an Associate Researcher of Institute for Quantum Science in Southern University of Science and Technology and Engineering and an Associate Researcher of Quantum Computing Research Center in Peng Cheng Laboratory, Shenzhen, China.