Kaiwen (Kevin) Zhu

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EDUCATION

The George Washington University — ***Washington, DC***
School of Engineering & Applied Science — **Expected May 2019**
Master of Computer Science

Nanjing University of Information Science & Technology — ***Nanjing, Jiangsu, China***
School of Computer Science& Software Engineering — **September 2013- June 2017**
Bachelor of Software Engineering

TECHNICAL SKILLS

Language: JAVA, PYTHON, MATLAB, PHP, SQL
Technique: Back-End (Spring MVC, Django), Machine Learning (Theano), Web-Crawler (Selenium, BeautifulSoup), Data-Mining (Panda, Numpy), Database (MySQL, Neo4j), AWS (EC2, RDS)

RELEVANT EXPERIENCE

The George Washington University — ***Washington, DC***
Recommendation System — **November 2018 - January 2019**

- Responsible for back-end development by Spring Boot and Python on EC2 and RDS
- Designed and Implemented the data model for recommendation System on MySQL and Neo4j
- Created python scripts for extracting and processing data, and integrated them into java program

Project of Computer Architecture — **September 2018 - December 2018**
Topic: PDP-8 Simulation

- Designed and implemented interface refer to PDP-8 by JAVA swing
- Simulated computer basic principle by JAVA, such as memory operation, cache operation, floating point calculation, pipeline, branch prediction, execution instructions, etc

Nanjing University of Information Science & Technology — ***Nanjing, Jiangsu, China***
Final Thesis — **January 2017 - May 2017**
Topic: Design and Implement of Weather Information Regression Estimation Model Based on Internet Meteorological Real Picture

- Collected weather data from the Internet through developing python web-crawler by BeautifulSoup and Selenium, then detected and corrected data for standardization and saved in MySQL database
- Built convolutional neural network with back propagation neural network base on Lenet-5 by PYTHON Theano for regression problem

Group Leader of Mathematical Contest in Modeling Contest in Modeling — **March 2017**
Topic: Modeling Refugee Immigration Policies

- Simplified the map of Europe to undirected graph for simulating resource distribution and improved Gravity Model for predicting population movement trend
- Searched optimal solution of Gravity Model by Genetic Algorithm

Group Leader of Undergraduate Mathematical Contest in Modeling — **July 2016**
Topic: Shadow Locating

- Analyzed and processed 24-hours video of shadow change by Python
- Used meteorological knowledge to built a model for predicting the video location according to shadow change, resulting obtain approximate location
- Optimized model parameters for precise location based on particle swarm optimization

Major Research Paper — **May 2017 - July 2017**
Topic: Research on the Recognition of the Adhesion Hollow Characters in the CAPTCHA Based on the Closed Cutting Algorithm

- Developed web-crawler by BeautifulSoup to download CAPTCHA with adhesion hollow characters from the Internet
- Standardized image data by PYTHON PILLOW after a series of operations such as crop, segmentation, grayscale, gaussian blur and edge detection
- Designed and implemented simulator base on the process of phage parasitic bacteria to identify CAPTCHA with adhesion hollow characters, resulting in identifying such CAPTHCHA with an accuracy rate of 71%

HONORS

- Meritorious Winner in Mathematical Contest in Modeling/ Interdisciplinary Contest in Modeling
- The 2nd prize of Undergraduate Mathematical Contest in Modeling in Jiangsu China
- The 2nd prize of The Ninth NUIST Program Design Contest