

# Yanjie He

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Github: YanjieHe

## EDUCATION

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- **The George Washington University** Washington D.C., USA  
*Master of Science in Data Analytics (Computer Science Track)* Anticipated July. 2020
- **Shanghai University of International Business and Economics** Shanghai, China  
*Bachelor of Arts in Economics; GPA: 3.71/4.00* Sept. 2013 – June. 2017

## WORK EXPERIENCE

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- **George Washington University** Washington D.C., USA  
*Computational Social Scientist* Sept. 2018 - Anticipated April. 2019
  - **Social Network Analysis and Data Analysis:**
    - \* Worked with Professor Vontrese Pamphile at the George Washington University School of Business.
    - \* Helped manage ongoing research projects related to social network analysis.
    - \* Applied mathematical and statistical techniques to novel data.
  - **Programming:** Reviewed academic papers and used Python and R to run the models.
- **Kantar Media CIC** Shanghai, China  
*Data Engineer Intern* July 2016 - Feb 2017
  - **Data Collection:** Designed data collection and data cleaning solution for Chanel APAC project.
  - **Data Visualization:** Developed Data Visualization Solution for GroupM television show.
  - **Text Mining:** Developed text mining system with team members. The system were used in making data analysis solution for L'Oréal, Chanel, Volkswagen and Dell.
    - \* The system contains a rule parser and an evaluator, which are able to let the data analysts to define the patterns that they want to match.
    - \* The system can provide basic-level functions for sentiment analysis

## SELECTED PROJECTS

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- **Compiler and Virtual Machine:** Developed a compiler for a statically typed language, a byte code disassembler and a virtual machine. And also, designed a byte code instruction list, which is similar to the JVM instructions. The compiler and disassembler are written in C++ and the virtual machine is written in ANSI C.
- **Matrix Library:** Implemented a matrix library in C#, which can be used for matrix computation and solving linear equations. This project got some users in the Internet.
- **Reversi A.I.:** Reversi is a board game. Due to the huge amount of possible states of the game, it is next to impossible for computer to enumerate every situation. Therefore, I implemented the minimax algorithm with alpha-beta pruning. The project is written in C++ and has a GUI which is build using Qt5 Framework.
- **Text Co-occurrence Network Analsis for The Hunger Games:** Completed a text analysis project where implemented text co-occurrence network to visualize the relationship between the main characters in the novel *The Hunger Games*. Written the program in Python and used packages including nltk, pandas, matplotlib and wordcloud. Plotted the network by using Gephi.
- **Landscape Image Clustering based on Color Histogram:** Completed a computer vision project.
  - Wrote a web crawler to download the landscape images from the Internet.
  - Used C++ to extract color histogram as image features based on OpenCV framework
  - Finally run the K-Means model on Apache Spark using scala to cluster the data.

## PROGRAMMING SKILLS

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- **Languages:** C, C++, C#, Java, Scala, Python, R, SQL, Scheme/Racket, Html/CSS
- **Technologies:** Data Analysis, Social Network Analysis, Qt 5 Framework, Linux, MySQL, Apache Spark
- **Software:** Gephi, Minitab