

Yanjie He

Portfolio of Projects: <https://yanjiehe.github.io/>

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EDUCATION

- **The George Washington University** Washington D.C., USA
Master of Science in Data Analytics (Computer Science track); GPA: 3.52/4.00
Anticipated May. 2020
 - **Courses:** Design & Analysis of Algorithms, Database System II, Information Retrieval System
- **Shanghai University of International Business and Economics** Shanghai, China
Bachelor of Arts in Economics; GPA: 3.71/4.00
Sept. 2013 – June. 2017

RELEVANT SKILLS

- **Coding:** C, C++, C#, Java, Scala, Python, R, SQL, Scheme/Racket
- **Front-end:** React.js, HTML/CSS, JavaScript, Bootstrap
- **Back-end:** Spring, Hibernate, MySQL, MyBatis, Redis, Linux, JUnit, Docker
- **Technologies:** RESTful API, Machine Learning, Computer Vision, Compiler Design
- **Frameworks & Tools:** Spark, OpenCV, AWS, Qt 5

PROFESSIONAL EXPERIENCE

- **Software Engineer Intern** Reston, VA, USA
ScientiaMobile, Inc. Jun. 2019 - Expected Aug. 2019
 - **ImageEngine:** *ImageEngine* (<https://www.scientiamobile.com/products/imageengine/>) is a framework for mobile devices and website, which automatically compresses and resizes images based on mobile device dimensions and capabilities. Working on an image classifier for detecting low-quality product images, which can improve the user experience of e-commerce websites.
 - **Software Development:** Developing an image classification system for the *ImageEngine* using Python and C++. E-commerce clients are widely using the system. It is processing API calls from global applications.
 - **Computer Vision:** Researching how to classify raster and vector images, and the mixture of both. Applying edge detection using OpenCV. Improving the image display in our clients' e-commerce website by detecting low-quality product images.
 - **Development Environment:** Development environment based on docker and Linux server. Standardized the C++ and Python dependencies.
 - **Data Collection:** Collecting image data by calling internal RESTful APIs. Using Python to make requests to the server in the company.
 - **Machine Learning:** Building an SVM classifier to remove irrelevant images, to make a clean dataset for further analysis. The overall accuracy of the model is 80%.
- **Computational Social Scientist** Washington DC, USA
George Washington University Oct. 2018 - Jun. 2019
 - **Social Network Analysis & Data Analysis:** Working for Professor Vontrese Pamphile's social science research project at George Washington University. Applying mathematical and statistical techniques to novel data.
 - **Analytical Programming:** Reviewing academic papers. Using Python, R and Scala to clean datasets and run the models. Utilizing packages including NetworkX and igraph.

SELECTED PROJECTS: <https://yanjiehe.github.io/>

- **A Compiler and a Virtual Machine:** Developed a compiler for a statically typed language, a bytecode disassembler, and a virtual machine in C++.
- **An Online Fashion Store:** Developing a website where customers can browse and purchase products, and a management system for merchants to manage.
 - **Front-end:** Building an UI with React.js, which communicates with the back-end service using RESTful API.
 - **Back-end:** Designing the data model. Developing a back-end with Spring and Hibernate, providing RESTful API.
 - **User Management:** Customers and merchants can register and login in two separate systems.
 - **Shopping Cart & Ordering:** Users can put their selections into the shopping cart and place orders. The merchants can process the requests with the management system.