

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, Advanced Software Paradigms
- **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, Flask, JUnit, Docker
- **Technologies:** Machine Learning, Computer Vision, Deep Learning, Compiler Design
- **Frameworks & Tools:** RESTful API, SQLite3, Spark, OpenCV, AWS, Qt 5

PROFESSIONAL EXPERIENCE

- **Software Engineer Intern** Reston, VA, USA
ScientiaMobile, Inc. Jun. 2019 - Expected Aug. 2019
 - **ImageEngine:** [ImageEngine](#) is a framework for mobile devices and website image optimization, widely used by industry leaders, including **Amazon, Google, and Oracle**. Completing an image classification system from scratch for detecting images which are not suitable for overly compressed.
 - **Software Development:** Developing an image classification system using Python and C++. Developing a web service using Flask providing RESTful API.
 - **Development Environment:** Standardizing the C++ and Python dependencies based on docker. Deploying and maintaining the service on Linux server.
 - **Computer Vision:** Researching how to classify raster and vector images, and the mixture of both. Applying technologies in computer vision using OpenCV.
 - **Deep Learning:** Using CNN in Keras to classify contours of geometric shapes and fonts. Achieved more than **98%** accuracy.
 - **Machine Learning:** Building an SVM classifier to remove irrelevant raster images. The overall accuracy of the model is **80%**.
- **Computational Social Scientist** Washington DC, USA
George Washington University Oct. 2018 - Jun. 2019
 - **Social Network Analysis:** Worked for Professor Vontrese Pamphile's social science research project. Applied mathematical and statistical techniques to novel data. Measured reputation premium gained from social connections.
 - **Data Analysis:** Reviewed academic papers. Cleaned datasets and run the models using Python, R and Scala. Utilized packages including NetworkX and igraph.

SELECTED PROJECTS

- **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.