

Yanjie He

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

LinkedIn: <https://www.linkedin.com/in/yanjiehe/>

Address: 1255 New Hampshire Ave NW, Washington DC 20036, USA

Mobile: +1 (202)733-7796

Email : heyanjie0@outlook.com

Github: <https://github.com/YanjieHe>

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, Play, Akka, Hibernate, MySQL, MyBatis, JDBC, Redis, Linux, Flask, JUnit, Docker
- **Technologies:** Machine Learning, Computer Vision, Compiler Design
- **Frameworks & Tools:** RESTful API, SQLite3, Spark, OpenCV, AWS (EC2, RDS), Qt 5

EXPERIENCE

- **Software Engineer Intern - Computer Vision** Reston, VA, USA
ScientiaMobile, Inc. Jun. 2019 - Aug. 2019
 - **ImageEngine:** ImageEngine (<https://www.scientiamobile.com/products/imageengine/>) is a framework for mobile devices and website image optimization, widely used by industry leaders, including **Amazon, Google, Oracle, and Willis Towers Watson**. Completing an image classification system from scratch for detecting images which are not suitable for overly compressed.
 - **Software Development:** Developed an image classification system using Python and C++. Built a C++ program for the internal system to use through a pipeline. Completed a web service using Flask providing RESTful API. Managed data of image features on MySQL.
 - **Development Environment:** Standardized the C++ and Python dependencies based on Docker. Deployed and maintained the service on Linux server.
 - **Computer Vision:** Researched how to classify the images which are not suitable for overly compressed. Applied technologies in computer vision using OpenCV. Built a classifier based on the analysis of color pixels and contours of images. Achieved more than **75%** accuracy.
 - **Machine Learning:** Built an SVM classifier to remove irrelevant raster images. The accuracy of the model is **80%**.
- **Research Assistant - Recommender System** Washington DC, USA
George Washington University Oct. 2018 - Feb. 2019
 - **Position:** Group research collaborator for Dr. Benjamin Harvey, faculty of George Washington University.
 - **Recommender System:** Developed a graph-based recommender system, offering real-time query service, and utilized collected user behaviors data.
 - **Back-end Development:** Developed the back-end with Java Spring, providing RESTful API; Operated MySQL database to organize the data.
 - **Information Retrieval System:** Developed a web scraper with Python to collect data. Applied NLP to retrieve information from user activities in the browser.
- **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++.
- **A Movie Recommender System:** Link: <https://yanjiehe.github.io/Movie-Recommender-System/> Developed a responsive web app for retrieving 26,631 movies' information and recommendations. The tech stack for the program is **Scala (Play, Akka, Spark)**, and the web service is deployed on the AWS **EC2**, managing MySQL database on **RDS**.