Yanjie He

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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, Deap 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. Managing data of image features on MySQL.
  - **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.