Xiao Luo

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RESEARCH INTERESTS Distributed Systems, Computer Vision, Applied Machine Learning

EDUCATION

Wuhan University, Wuhan, Hubei, China

- M.Sc. in Signal and Information Processing Sep 2012 – Jun 2015
  - Thesis: Print Document Identification Based on Texture Analysis
  - Adviser: Prof. Qinghu Chen
  - Focus: Pattern Recognition, Computer Vision.
  - Overall GPA: 3.94/4 (WES iGPA Calculator) Rank: top 1%

Wuhan University, Wuhan, Hubei, China

- B.E. in Electronic Information Engineering Sep 2008 – Jun 2012
  - Overall GPA: 3.66/4 (WES iGPA Calculator) Rank: 19/320

PUBLICATIONS My **Google Scholar**

1. Qianjin Zhou, Yuchen Yan, Tianhong Fang, <u>Xiao Luo</u>, Qinghu Chen. "Text-independent Printer Identification Based on Texture Synthesis", *Multimedia Tools and Applications*, vol. 75, no. 10, pp. 5557–5580, May 2016. (SCI-Indexed) [**Link**] [**Code**]

2. <u>Xiao Luo</u>, Qinghu Chen, Yuchen Yan. "Printed Characters' Texture Identification Based on Two-factor Analysis", *Journal of Computational Information Systems*, vol. 11, no. 14, pp. 5199–5207, Jul 2015. (EI-Indexed) [**Link**] [**Code**]

ENGLISH PROFICIENCY

- GRE: Verbal 163, Quantitative 170, Writing 4.0
- TOEFL: 112 (Reading 29, Listening 30, Speaking 25, Writing 28)

SKILLS

- Coding Ability: Leetcode 400+ questions solved
- Programming Language: Java, Python, Shell, PHP, JavaScript, HTML, CSS, C/C++, Matlab
- Operating Systems: Linux(Ubuntu, CentOS), Windows
- Backend Server Framework: Dubbo, Netty, Spring Boot, Spring
- Middle Ware: MySQL, Redis, MongoDB, ETCD, Zookeeper, Rocket MQ, Rabbit MQ, Docker, OpenCV

- Big Data: Spark, Hadoop, HDFS, Hive, MapReduce
- Machine Learning: Numpy, Pandas, Scikit-learn
- Deep Learning: Tensorflow2.0, Keras
- Development tools: Git, Maven, Jenkins
- Book: *Pattern Recognition and Machine Learning*
- MOOCs: Machine Learning(Stanford), Deep Learning(Coursera), Algorithm(Princeton)

RESEARCH PROJECTS

I participated in a forensic project using pattern recognition and computer vision algorithms to do printed document verification. The primary task is to eliminate the influence of different alphabetic characters' local shape factor and preserve only texture factor. Here are the two subprojects, corresponding to the two methods we adopt to eliminate shape factor.

- By using texture synthesis algorithms: Printed Document Verification based on texture synthesis [**paper**] [**code**]
- By using the statistic model, two-factor analysis: Printed Document Verification based on two-factor analysis [**paper**] [**code**]

INDUSTRY PROJECTS

I have several years' working experiences as a software engineer. Growing from a junior developer to a senior one, I have participated in nearly every aspect of industrial software development, including backend, frontend, testing and DevOps. I have been trying to build large-scale scalable systems, improving consistency and availability.

- Backend server application of a financial management App with millions scale users [**blog**]
- Supply chain management system of an E-commerce company [**code**] [**blog**]
- I once led a seven members' team to develop a PDF search engine [**blog**]

LEETCODE ALGORITHMS

I have been solving LeetCode questions since 2014. In total, I have solved 400+ questions. I wrote a series of blog posts to summarize various LeetCode's algorithm questions. [**account**] [**blog posts**]

WORKING EXPERIENCES

B&Q China,	Shanghai, China
▪ Senior Software Engineer	Jul 2019 – Nov 2020
MoboTap,	Wuhan, China
▪ Junior Software Engineer	Jul 2015 – May 2018
Electronic Information School, Wuhan University	Wuhan, China
▪ Research Assistant	Sep 2012 – Jun 2015