Zhe Wang

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HIGHLIGHTS

SOFTWARE ENGINEERING

Outstanding
Fundamental Algorithms
Fundamental Data Structures
C Programming Language
Advanced Data Structures

Solid Background
High-Performance Programming
Multithreading
Distributed Computing
High-Performance Database
C++ Programming Language

Well Executed
Machine Learning
JAVA Programming Language
Python Programming Language
PHP Programming Language
RESTful Web Service

SELECTED AWARDS

PROGRAMMING

Ranking 1ST
TCO 2017 India
TopCoder Open 2017
2017.08 | Bangalore

Ranking 35TH
Distributed Round 2
Google Code Jam 2017
2017.06

Ranking 36TH
TCO 2016 Russia
TopCoder Open 2016
2016.09 | St. Petersburg

Ranking 9TH
Round C
Google APAC 2015
2014.10

Ranking 3RD
Onsite Final
Tencent Hackathon 2013
2013.04 | Chengdu

Ranking 273RD
Round 3
Google Code Jam 2012
2012.06

EDUCATION

CHONGQING UNIVERSITY

BE in Computer Science
Left campus in 2014.06
Graduate in 2017.06

SELECTED TECHNICAL EXPERIENCE

WONDER | Tech Lead of Algorithm Implementation Team

Augmented Reality Entertainment Platform on Mobile
Hangzhou Tomorning Technology Co., Ltd.
Jan 2017 – Oct 2017 | Hangzhou, Zhejiang Province, China
[C Programming Language, Gprof, Pthread, Socket]
Focus on improving the computing efficiency of the computer vision relative algorithm at the code implementation level with data structure optimization, computational geometry algorithm optimization, profiling, code optimization, multithreading, and clustering.

- Accelerate normalized 2048-dimension 32-bit float vector nearest neighbor searching by 50 times though converting the problem to cosine similarity with linear algebra optimization and automatic vectorization.
- Improve the efficiency of a set of the geometric request in the computer visual computing processes significantly with some computational geometry techniques.

WONDER | Tech Lead of Backend Team

Augmented Reality Entertainment Platform on Mobile
Hangzhou Tomorning Technology Co., Ltd.
Aug 2016 – Dec 2016 | Hangzhou, Zhejiang Province, China
[JAVA Programming Language, Spring Boot, Servlet, Mysql]
Responsible for RESTful Web Service Server Framework design and implementing, high-performance database structure develop, RESTful Web Service API standard drafting, team coordination, progress control, risk management and code review.

- Wrapping Spring Boot for working with a higher-efficiency on the server and making it easier to develop for the product with the development team.
- Independently optimize Mysql databases performance, make each business service request can complete in 10 milliseconds.

WONDERLAND | Software engineer of Backend Team

Augmented Reality Game Platform on Mobile
Hangzhou Tomorning Technology Co., Ltd.
Jun 2014 – Jul 2016 | Hangzhou, Zhejiang Province, China
[C Programming Language, Pthread, Socket, LIBSVM, PHP, Mysql]
Prepare and implement the distributed high-dimensional vector archiving and approximate k-Nearest Neighbors searching system working for computer vision computing. Research and perform the superficial image scene indexing algorithm with Machine Learning techniques. Create the complex branching game logic engine for the platform. Develop the RESTful Web Service for the mobile applications.

- Independently prepare and implement WLANN (Wonderland Library for Approximate Nearest Neighbors). It works more than 30% faster than FLANN (Fast Library for Approximate Nearest Neighbors) with 128-dimensional 8-bit unsigned integer vectors. On the other hand, WLANN is further optimized for parallel query and provides distributed computing support.
- Independently research and perform a superficial image scene indexing algorithm based on Visual Categorization with Bags of Keypoints technique. It provides an accuracy of up to 93% of the landmark scene superficial indexing for the product.
- Both two modules described above has remarkable stability, these modules had been working for more than one year continuously with no accident and visible memory leaks.