

# Zijian Zhang

# Curriculum Vitae

"Power" means the approach to make the world better

## Education

2015-Present Masters of Science, Leibniz Universitaet Hannover, Hannover, Lower Saxony,

Germany, GPA – 1.8 (German system).

Informatik (Computer Science)

 $2014-2015 \quad \textbf{Learning of German language}, \ \textit{various of language schools}, \ \textbf{Hannover}, \ \textbf{Lower}$ 

Saxony, Germany, DSH-3 (Deutsche Sprachpruefung fuer den Hochschuluzugang -

Stufe 3).
German language

2010–2014 Bachelor of Science, Xidian University, Xi'an, Shanxi, China, GPA – 3.0.

Information Security

# Bachelor Thesis

Title GPU accelerated Detection of communities in graph

Supervisors Professor Weidong Zhang & Associate Professor Yutao Qi

Description This thesis provide an approach of detecting and dividing communities on a data

structure of graph, using MST community detection algorithm with the acceleration

of GPU with CUDA toolkit

# Experience

#### Miscellaneous

2016—Present **Studentische Hilftskraft**, Institute L3S in Germany, Hannover, Lower Saxony, Germany.

Help to find an efficient parallel way of generating several individual Word-Embedding models, instead using the whole corpora in a huge single batch. Help to find a method of combining individual Word-Embedding using linear algebra and neural network, where the combined model should be acceptable with respect of accuracy

#### Detailed achievements:

- Learned programming in Python 'pythonicly'
- Learned several machine learning algorithms, including but not limited to:
  - Classification with Bayes classifier, C4.5 classifier and SVM
  - Linear and nonlinear regression
  - Clustering algorithm such as K-means, hierarchical clustering, density based clustering
- Learned basis of deep learning, including but not limited to:
  - Shallow models such as Restricted Boltzmann Machine, Quantum Boltzmann Machine, auto encoder, nonlinear classifier in Word-Embedding
- Learned basis of information retrieval
- Had a beginner-level understanding of NLP
- 2015—Present **Studentische Hilftskraft**, Institut Mess- und Regelung(Institute of Measuring and Controlling), Hannover, Lower Saxony, Germany.

Contributed to a doctor project about automatic detecting defects on surface of manufactures using laser. Help to build a prototype of the project using C/C++, Visual C++ and Matlab

2013–2014 **Student Part-time job**, School of Electronic Engineering, Xi'an, Shanxi, China.

Help to analyzing functionality of 802.11n WLAN protocol in order to enhance security of wireless communication

#### Awards

# 2012 National 2nd Prize in The National Undergraduate Electronic Design Contest Information Security Invitational 2012

Gave an insight into internet communication protocol inside GNU/Linux kernel. Built a security enhanced sub-system using kernel module to keep computer stealth on the Internet. Researched sequence of data encapsulation and classified unnormal out of normal sequence.

- 2011 National second scholarship in Xidian University
- 2009 Second Prize in NOIP (National Olympiad in informatics in Provinces) 2009 NOIP is a infrmatical competition which conducted in provinces. It intends to inspect mastering and comprehension of computational algorithms of contestants
- 2008 Second Prize in NOIP 2008
- 2007 Second Prize in NOIP 2007

# Computer skills

Programming C/C++, Python, Java, Pascal, Matlab, GNU Bash

System GNU/Linux including daily management and kernel programming

Theory Algorithms in graph, Dynamic programming, Number theory, Machine learning,

Deep learning, Quantum mechanic basis

Front-end Matlab GUI Tookit, QT

Web HTML5, CSS3, ECMAScript

Security Reverse engineering on x86, Cryptography basis, Penetration testing basis

Others CUDA, Functional programming, LATEX, Repairing imported printer

# Languages

Chinese Mothertongue

English Intermediate Conversationally fluent

German Intermediate Conversationally fluent
Japanese Basic Basic words and phrases only

# Interests

- Reading

- Solving logic puzzles

- Fitness

- History

- Running

- Chinese Flute

- Chinese martial art

- Philosophy

- Forensic Science and Criminology