

Chang Liu

SOFTWARE DEVELOPMENT ENGINEER

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"Success is not final, failure is not fatal. It is the courage to continue that counts."

Education

KTH Royal Institute of Technology (KTH)

Stockholm, Sweden

M.SC. MAJOR: EMBEDDED SYSTEMS, MINOR: INNOVATION & ENTREPRENEURSHIP

2015 - 2016

- Machine Learning, Data Analysis, Software Development, Internet of Things, ASIC Design and FPGA, System Modeling

Eindhoven University of Technology (TU/e)

Eindhoven, The Netherlands

M.SC. MAJOR: EMBEDDED SYSTEMS, MINOR: INNOVATION & ENTREPRENEURSHIP

2014 - 2015

- Computer Architecture, Embedded Software and Hardware, Multiprocessors, Network-on-Chip, Wireless Networks, Digital Design

EIT Digital Master School

The Netherlands & Sweden

INNOVATION & ENTREPRENEURSHIP

2014 - 2016

- Innovation & Entrepreneurship, Business Development, Marketing Research, Financial Analysis, Product Development

University of Electronic Science and Technology of China (UESTC)

Chengdu, China

B.ENG., ELECTRONICS AND COMPUTER SCIENCE RELATED SUBJECTS

2010 - 2014

- Excellent Graduation Thesis. Overall GPA: 88%

Skills & Competences

Programming	Python, C, C++, Java, JavaScript, Scala, CUDA, SystemC, VHDL, Verilog
Tools	Linux Environment, Shell Script, \LaTeX , Git, Amazon EC2
Languages	English, Chinese (Mandarin)
Business	Innovation & Entrepreneurship, Business Development, Marketing, Product Development
Personality	Team-player, Proactive, Motivated, Ambitious, Persuasive, Open-minded, Curious, Adaptive, Responsible

Experience

WORKS

ING - Internationale Nederlanden Groep

Amsterdam, The Netherlands

JR IT SPECIALIST - DEV ENGINEER

Sep. 2016 - PRESENT

- IT Graduate Program. Lean & Agile and Scrum Team. DevOps..
- Project 1: Data analysis with Cyber Fraud Prevention Team for Wholesale Banking Service. Python (pandas, numpy, sklearn).

Ericsson

Stockholm, Sweden

INTERNSHIP AND MASTER THESIS

Jan. 2016 - Aug. 2016

- Machine Learning and Data Analysis on log data. Recurrent Neural Network (RNN) and Naive Bayes.
- Python (with Keras, Numpy, SciPy and Theano), Java and Amazon EC2.
- Large scale software architecture.

Robotics Institute, UESTC

Chengdu, China

RESEARCH ASSISTANT

Sep. 2012 - Jun. 2014

- Design and development of intelligent controlling algorithms and solutions for robot manipulators and marine risers.
- Implementation of the algorithms on real robots. Accomplishment of several papers published.

PROJECTS

WeChat WeApp: 500px | 微信小程序之 500px

PERSONAL OPEN SOURCE PROJECT

- JavaScript, CSS, XML.
- Front-end Design and Programming.

Amsterdam, The Netherlands

Oct. 2016

Personal Projects on Machine Learning

KTH ROYAL INSTITUTE OF TECHNOLOGY (KTH)

- Machine Learning algorithms analysis and programming using Python.
- Study and practice Apache Spark and Scala language.

Stockholm, Sweden

Sep. 2015 - PRESENT

System Design using SystemC (C++) and Transaction Level Modeling (TLM)

KTH ROYAL INSTITUTE OF TECHNOLOGY (KTH)

- System design and implementation using SystemC: Bus, RAM and ROM, Channel and Interface, Transaction Level Modeling, Concurrency and Time, Process and Thread, Simulation, Debugging, Signal and Data Type.

Stockholm, Sweden

Sep. 2015 - Nov. 2015

JPEG Decoding based on Xilinx's MicroBlaze Multiprocessor Embedded Platform

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

- JPEG Decoding algorithm and Image Processing.
- Focused on the impact of multiple processors, accelerators, distributed shared heterogeneous memory hierarchy.
- Various parallel strategies. DMAs and Network-on-Chip Communication with limited bandwidth.

Eindhoven, The Netherlands

Feb. 2015 - Jun. 2015

Dynamic Memory Management for High Performance and Low Power Cost

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

- Use smaller memories/buffers: Scratch Pad Memory (faster and less energy consuming)
- Reduce the number of memory accesses by optimizing C code: Loop Transformation, Temporal and Local Data Reuse, etc.

Eindhoven, The Netherlands

Dec. 2014 - Jan. 2015

Bitcoin Mining based on NVIDIA's GPUs using CUDA

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

- Solve the hash algorithm for mining "fake" bitcoins by utilizing GPU's powerful data parallelism and multi-thread features.
- GPU architecture, multi-thread computing, shared memory. CUDA C and OpenCL.

Eindhoven, The Netherlands

Oct. 2014 - Dec. 2014

Wireless Sensor Network (WSN): Automatic Agricultural Monitor and Control

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

- Design and evaluate a WSN based on a bunch of Atmel's low-power MCUs using C.
- Implement Beacon-enabled CSMA-based MAC protocol (IEEE 802.15.4) and hierarchy routing layer.

Eindhoven, The Netherlands

Sep. 2014 - Dec. 2014

Virtual Environment: Panum's Fusional Area Approximation

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

- Design and conduct an experiment to measure the shape of a fusion area.
- Based on Fontys' VR-Cave laboratory and WorldViz Vizard. Python.

Eindhoven, The Netherlands

Sep. 2014 - Dec. 2014

Honors & Awards

SCHOLARSHIPS

- 2014 **Scholarship of Excellent Graduate** Outstanding performance during entire undergraduate time
- 2013 **Jiuzhou Scholarship** Only two students were honored
- 2012 **Suzhou Industrial Park Scholarship** Top 5%
- 2011 **The People's Scholarship** Great grades in the first year

UESTC, China

Jiuzhou Group, China

Suzhou Industrial Park, China

UESTC, China

Extracurriculums

Business Development. Market Research. Presentation and Communication.

EIT DIGITAL SUMMER SCHOOL

EIT DIGITAL WINTER SCHOOL

Finland & The Netherlands

Aug. 2015, Helsinki, Finland

Feb. 2015, Eindhoven, The Netherlands

Volunteer on ICONS 2013

THE 3RD IFAC INTERNATIONAL CONFERENCE ON INTELLIGENT CONTROL AND AUTOMATION SCIENCE (ICONS 2013)

Chengdu, China

Sep. 2013

Volunteer on ICSR 2012

INTERNATIONAL CONFERENCE ON SOCIAL ROBOTICS (ICSR 2012)

Chengdu, China

Oct. 2012