

Chang Liu

SOFTWARE DEVELOPMENT ENGINEER

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"Perfection is finally attained not when there is no longer more to add, but when there is no longer anything to take away."

Education

KTH Royal Institute of Technology (KTH) | EIT Digital

Stockholm, Sweden

M.SC. MAJOR: EMBEDDED SYSTEMS, MINOR: INNOVATION & ENTREPRENEURSHIP. GPA: 8.7/10.0

2015 - 2016

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

Eindhoven University of Technology (TU/e) | EIT Digital

Eindhoven, The Netherlands

M.SC. MAJOR: EMBEDDED SYSTEMS, MINOR: INNOVATION & ENTREPRENEURSHIP. GPA: 7.8/10.0

2014 - 2015

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

University of Electronic Science and Technology of China (UESTC)

Chengdu, China

B.ENG., ELECTRONICS AND COMPUTER SCIENCE RELATED SUBJECTS. OVERALL GPA: 88%

2010 - 2014

- Excellent Graduation Thesis.

Skills & Competences

Programming	Python, Java, C, C++, Shell, Scala, SQL, HTML, JavaScript, , CUDA
Tools	Linux, Docker, Database (Oracle, Cassandra), Elasticsearch, Logstash, Kibana, Git, \LaTeX
Languages	English (Full professional proficiency), Chinese (Native), Dutch (Elementary)
Personality	Team-player, Proactive, Motivated, Ambitious, Open-minded, Curious, Adaptive, Responsible

Experience

WORKS

ING - International Netherlands Group

Amsterdam, The Netherlands

IT SPECIALIST

Sep. 2016 - PRESENT

- IT Graduate Program. Agile Software Development. Scrum Team and DevOps.
- Rotation 1: Data analysis with Cyber Fraud Prevention Team for Wholesale Banking. Python, Elasticsearch, Logstash, Kibana (ELK).
- Rotation 2: Site/Service Reliability Engineering (SRE). Nginx, Tomcat, Polymer (HTML, JavaScript), PHP, Database (Oracle, Cassandra).

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

Amsterdam, The Netherlands

PERSONAL OPEN SOURCE PROJECT

Oct. 2016

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

Personal Project on Machine Learning

Stockholm, Sweden

KTH ROYAL INSTITUTE OF TECHNOLOGY (KTH)

Oct. 2015 - Sep. 2016

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

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

Stockholm, Sweden

KTH ROYAL INSTITUTE OF TECHNOLOGY (KTH)

Sep. 2015 - Nov. 2015

- 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.

JPEG Decoding based on Xilinx's MicroBlaze Multiprocessor Embedded Platform

Eindhoven, The Netherlands

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

Feb. 2015 - Jun. 2015

- 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.

Dynamic Memory Management for High Performance and Low Power Cost

Eindhoven, The Netherlands

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

Dec. 2014 - Jan. 2015

- 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.

Bitcoin Mining based on NVIDIA's GPUs using CUDA

Eindhoven, The Netherlands

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

Oct. 2014 - Dec. 2014

- 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.

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

Eindhoven, The Netherlands

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

Sep. 2014 - Dec. 2014

- 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.

Virtual Environment: Panum's Fusional Area Approximation

Eindhoven, The Netherlands

EINDHOVEN UNIVERSITY OF TECHNOLOGY (TU/E)

Sep. 2014 - Dec. 2014

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

Honors & Awards

SCHOLARSHIPS

2014 **Scholarship of Excellent Graduate** Outstanding performance during entire undergraduate time

UESTC, China

2013 **Jiuzhou Scholarship** Only two students were honored

Jiuzhou Group, China

2012 **Suzhou Industrial Park Scholarship** Top 5%

Suzhou Industrial Park, China

2011 **The People's Scholarship** Great grades in the first year

UESTC, China

Socials

Business Development. Market Research. Presentation and Communication.

Finland & The Netherlands

EIT DIGITAL SUMMER SCHOOL

Aug. 2015, Helsinki, Finland

EIT DIGITAL WINTER SCHOOL

Feb. 2015, Eindhoven, The Netherlands

Volunteer on ICONS 2013

Chengdu, China

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

Sep. 2013

Volunteer on ICSR 2012

Chengdu, China

INTERNATIONAL CONFERENCE ON SOCIAL ROBOTICS (ICSR 2012)

Oct. 2012