

Ou Changkun

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Last update: October 1, 2018

Curriculum Vitae

Science and art, life in between



Education

- **University of Munich (LMU)** Munich, Germany
Master of Science in Computer Science; current GPA: 2.05/1.00 Apr. 2018 – Present
- **University of Munich (LMU)** Munich, Germany
Master of Science in Human-Computer Interaction; current GPA: 1.87/1.00; [Transcript](#) Oct. 2016 – Feb. 2018 (*exp.*)
- **University of Electronic Science and Technology of China (UESTC)** Chengdu, China
Master of Engineering in Software Engineering Aug. 2016 – Sep. 2016
- **Southwest University for Nationalities (SWUN)** Chengdu, China
Bachelor of Engineering in Computer Science; GPA: 3.74/4.0; Ranking: 1/154; [Transcript](#) Sep. 2012 – Jul. 2016

Selected Skills

- **Languages:** go; python; javascript (typescript); c/c++ (for optimization); markdown; L^AT_EX; native Chinese; fluent professional English; elementary German
- **Systems/Tools:** General Linux DevOps; Docker; AWS/AlibabaCloud; MySQL/MongoDB/Redis
- **Frameworks:** sklearn/tensorflow/keras/opencv/numpy/matplotlib, flask, vue/angular/electron/jquery, node/express, beego/gin-gonic
- **Experienced Fields:**
 - **Human side:** Ubiquitous interaction techniques; User study; Quantified user experience; Website prototyping; Crowdsourcing strategy
 - **Machine side:** Statistical learning theory (specialize in generalization); Computer vision (specialize in convolutional network); Computer networks (specialize in transport layer protocols); Nature language processing (specialize in recurrent network methods); Distributed computing (specialize in microservices and consensus protocols)
 - **Mathematics:** Stochastic process; Probability; Elementary number theory; Formal logic and proof
- **Certificates:** Coursera, Andrew Ng: [Deep Learning Specializations](#), certificates: [1](#), [2](#), [3](#), [4](#), [5](#)

Publications

- Changkun Ou. *Automated UI Discovering for Web Applications (draft)*. **Master Thesis for HCI**, Inprogress, 2018.
- Changkun Ou. *An Introduction to Recent Mobile Affective Inference Techniques: Methods, Applications and Challenges*. Advanced Seminar Media Computer Science, IFI LMU, 2018. [English](#), [Slides](#).
- Matthias Geiger, Changkun Ou, Cedric Quintes. *WatchOut: A Road Safety Extension for Pedestrians on a Public Windshield Display*. Lecture Advanced Topics in HCI, IFI LMU, 2017. [English](#).
- Changkun Ou, Yifei Zhan, Zhe Li. *A Novel GWAP Disaster Monitoring System*. Lecture Human Computation, IFI LMU, 2017. [English](#)
- Changkun Ou, Yaxi Chen(responsible professor), Andreas Butz(co-reviwer). *Designing Alternative Contact-free Control Modalities for Smart Watches*. 2016, **Bachelor Thesis**. [Simplified Chinese](#), [English](#)
- Changkun Ou, Yaxi Chen. *Combining Touch Biometrics and Motion Sensors for Hand Posture Recognition and User Authentication System*. Journal of Southwest University for Nationalities(Nature Science Edition). 2016, 42(4):429-435. [Simplified Chinese](#)

- Changkun Ou, Zhaoyang Guo, Yaxi Chen. *Space interactions based on monocular vision and simple gestures*. Journal of Southwest University for Nationalities(Natural Science Edition). 2014, 40(16):871-876. [Simplified Chinese](#)
- Changkun Ou, Mu Huang, Mengxin Shi, Jiang Cheng. *A Study in Keep-Right-Except-To-Pass Rule*. 2014, MCM Meritorious Winner [English](#)

Selected Talks

- Changkun Ou. *On the development of Quantified UX Metric*. Design Workshop II, IFI LMU, 2018 [English](#).
- Changkun Ou. *Capsule Network with Routing Mechanism*. Advanced Seminar Deep Learning, IFI LMU, 2018 [Part 1](#), [Part 2](#).
- Changkun Ou. *Understanding Generalization in Deep Learning*. Advanced Seminar Deep Learning, IFI LMU, 2018. [English](#), [Video](#).
- Hermann Redich, Patrick Börzel, Isabella Galter, Collin Leiber, Changkun Ou *Convolutional Neural Networks from Zero to Hero*. Advanced Seminar Deep Learning, IFI LMU, 2018. [English](#).
- Changkun Ou. *Mathematical Modelling Tutorial (Mandarin Chinese Video Series)*. 2016, [YouTube Playlist](#)

Recent Work Experiences

- **Academic tutor** Munich, Germany
 LMU Lecture “*Deep Learning and Artificial Intelligence*” WiSe 2018/19 Oct. 2018 – Feb. 2019 (exp.)
 - **Materials and notes:** [Homepage](#)
- **LabEx** Chengdu, China
 Backend engineer (Remote, part-time) Mar. 2018 – Sep. 2018
 - **Backend:** Go, microservices, protocol design, fundamental supports
- **Academic tutor** Munich, Germany
 LMU Lecture “*Machine Learning*” SoSe 2018 Aprl. 2018 – Jul. 2018
 - **Materials and notes:** [Homepage](#)
- **MagicLingua** Munich, Germany
 Fullstack engineer (Freelance) Nov. 2017 – Mar. 2018
 - **Speech recognition:** Neural network squeezing; Audio streaming solutions
 - **Language Processing:** Conversation understanding; Language level modelling; Answers fault-tolerance
 - **Web development:** Angular; Spring; WebSocket; MongoDB; Elasticsearch; Serverless

Recent Side Projects

- **Go under the hood:** A book for source code study of programming language Go
- **gomat:** a matrix package with cache-aware lock-free tiling optimization in Go
- **sched:** a high performance reliable task scheduling package in Go
- **Modern C++ Tutorial:** A book provides the fastest guide towards modern C++
- **Tensorflow docs translation:** major contributor and project maintainer
- **Juejin Translation Public Community:** major contributor
- **GitHub for more:** github.com/changkun

Selected Honors & Awards

- **Siemens AILab Hackathon** Munich, Germany
2nd Winner Nov. 2017
- **China National Scholarship** Chengdu, China
at UESTC Sep. 2016
- **Excellent Bachelor Graduation Thesis Award** Chengdu, China
at SWUN Jun. 2016
- **Outstanding University Graduates Student Award** Chengdu, China
at Sichuan Province Jan. 2016
- **Outstanding Student Scholarship** Chengdu, China
at SWUN Nov. 2015
- **Student Innovative Annual Excellent Project** Chengdu, China
at SWUN Jun. 2015
- **Sichuan Province Computer Production Competition** Chengdu, China
2nd Award May 2015
- **China National Scholarship** Chengdu, China
at SWUN Sep. 2014
- **Computer Production Competition** Chengdu, China
2nd Award Jun. 2014
- **American Mathematical Contest in Modeling(MCM) 2014** Chengdu, China
Meritorious Winner Apr. 2014

Selected Public Activities

- **Student Volunteer** Chengdu, China
at [Conference Smart Graphics 2015](#) Aug. 2015
- **Guigu Lab Team Leader** Chengdu, China
at SWUN Sep. 2014 – Jun. 2015
- **Mathematical Modeling Association Academic Vice Director** Chengdu, China
at SWUN Oct. 2012 – Jun. 2014