

# Ou Changkun

Munich, Germany

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## Curriculum Vitae

Science and art, life in between



Born on October 25th 1993 in Zhijiang/Hunan/China

People's Republic of China citizenship

Single

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## Education

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- **University of Munich (LMU)** Munich, Germany  
*Ph.D. Candidate in Human-Computer Interaction* Feb. 2019 – Present
  - **University of Munich** Munich, Germany  
*Master of Science in Computer Science; GPA: 2.05/1.00* Apr. 2018 – Present
  - **University of Munich** Munich, Germany  
*Master of Science in Human-Computer Interaction; GPA: 1.87/1.00; [Transcript](#)* Oct. 2016 – Jan. 2019
  - **University of Electronic Science and Technology of China (UESTC)** Chengdu, China  
*Master of Engineering in Software Engineering* Aug. 2016 – Sep. 2016
  - **University of Munich** Munich, Germany  
*Exchange Student* Sep. 2015 – Feb. 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
  - **First Middle School of Zhijiang** Huaihua, China  
*Senior Middle School; Taken a university entrance examination (Gaokao)* Mar. 2010 – Jul. 2012
  - **Changsha Foreign Language School** Changsha, China  
*Senior Middle School* Aug. 2009 – Feb. 2010
  - **Second Middle School of Zhijiang** Huaihua, China  
*Junior Middle School* Sep. 2006 – Jul. 2009
  - **Chengnan Primary School of Zhijiang** Huaihua, China  
*Primary School* Sep. 2000 – Jul. 2006

## Skills

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- **Languages:** go; python; javascript (typescript); c/c++ (for optimization); markdown; L<sup>A</sup>T<sub>E</sub>X; 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:** User behavior modeling; User study; Ubiquitous interaction techniques; 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

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- Changkun Ou, Malin Eiband(advisor), Daniel Buschek(co-advisor), Heinrich Hußmann(responsible professor). *Understanding and Predicting User Browsing Behavior*. 2019, **Master Thesis**.
- 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-reviewer). *Designing Alternative Contact-free Control Modalities for Smart Watches*. 2016, **Bachelor Thesis**. [Simplified Chinese](#), [English](#)
- Yaxi Chen, Changkun Ou. *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](#)
- Yaxi Chen, Changkun Ou, Zhaoyang Guo. *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](#)

## Open Talks

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- Changkun Ou. *Understanding and Predicting User Browsing Behavior*. Masters Defence Presentation, 2019 [English](#).
- 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](#)

## Work Experiences

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- **Academic tutor** Munich, Germany  
LMU Lecture “[Machine Learning](#)” and “[Deep Learning and Artificial Intelligence](#)” Apr. 2018 – Feb. 2019
  - SoSe 2018, materials and notes: [Homepage](#)
  - WiSe 2018/19, materials and notes: [Homepage](#)
- **LabEx** Chengdu, China  
VP of Software Engineering (Remote) Apr. 2018 – Dec. 2018
  - **Backend:** Infrastructure architecting and development: multi-cloud automation, remote desktop protocols, auto scaling, microservices
- **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

- **Shiyanlou** Chengdu, China  
*Software Engineer (Intern)* *Jun. 2016 – Sep. 2016*
  - **Recommendation System:** Online course recommendation system; Python; MongoDB; Collaborate Filtering
  - **Distributed Log System:** Elasticsearch; Logstash; Kibana; Redis
  - **Cross Platform Desktop Client:** Electron based development for macOS/Windows/Linux
  - **Teaching Material Writing:** Modern C++ based teaching material writing
- **LMU Media Informatics Group** Munich, Germany  
*Student Researcher (Intern)* *Oct. 2016 – Jan. 2016*
  - **Research topic:** Combining motion sensors and touch offset classify hand Posture and users
  - **Outcomes:** A iOS prototype App for User Study, densely data analysis via Support Vector Machine; paper report
- **Academic Tutor** Chengdu, China  
*Cooperation lecture “Human-Computer Interaction I” between LMU and SWUN* *Jul. 2015*

## Open Source Projects

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

## Honors & Awards

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- **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*
- **American Mathematical Contest in Modeling(MCM) 2014** Chengdu, China  
*Meritorious Winner* *Apr. 2014*

## Public Activities

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- **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

## Personal Interests

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- **Open source contributions:** Writting open source book; Contributing and maintaining open source softwares
- **Video blogging:** Making videos on [YouTube channel](#)
- **Blogging and knowledge sharing:** on <https://changkun.de>
- **Video gaming:** Sony Playstation and Nintendo Switch player

## References

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- **Prof. Andreas Butz:** currently supervise for Master studies at LMU Munich Medieninformatik, Munich, Germany
- **Prof. Heinrich Hußmann:** exchange student course “Human-Computer Interaction I” at Southwest University for Nationalities, Chengdu, China
- **Dr. Daniel Buschek:** currently supervise for Master thesis at LMU Munich Medieninformatik, Munich, Germany
- **Malin Eiband:** currently supervise for Master thesis at LMU Munich Medieninformatik, Munich, Germany
- **Florian Lachner:** supervised for individual practical course at LMU Munich Medieninformatik, Munich, Germany
- **Prof. Yaxi Chen:** supervised for bachelor thesis at Southwest University for Nationalities, Chengdu, China
- **Prof. Wei Zhou:** supervised for bachelor thesis at Southwest University for Nationalities, Chengdu, China