Ou Changkun

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Curriculum Vitae

Science and art, life in between

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Born on October 25th 1993 in Zhijiang/Hunan/China
People's Republic of China citizenship
Single
Last update: January 18, 2019

Education

- **University of Munich (LMU)** — Munich, Germany
  Research Fellow 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*

Work Experiences

- **Academic tutor** — Munich, Germany
  LMU Lecture "Machine Learning" and "Deep Learning and Artificial Intelligence" — *Aprl. 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 Meterial Writing**: Modern C++ based teaching meterial 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*

Skills

- **Languages: go**; **python**; **javascript (typescript)**; **c/c++ (for optimization)**; markdown; LATEX; 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

- 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.* Lercture Advanced Topics in HCI, IFI LMU, 2017. English.

- Changkun Ou, Yifei Zhan, Zhe Li. *A Novel GWAP Disaster Monitoring System.* Lercture 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

- 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

- 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

Open Source Projects

- ***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

Honors & Awards

- **Siemens AILab Hackathon**
  2nd Winner
  Munich, Germany
  Nov. 2017

- **China National Scholarship**
  at UESTC
  Chengdu, China
  Sep. 2016

- **Excellent Bachelor Graduation Thesis Award**
  at SWUN
  Chengdu, China
  Jun. 2016

- **Outstanding University Graduates Student Award**
  at Sichuan Province
  Chengdu, China
  Jan. 2016

- **Outstanding Student Scholarship**
  at SWUN
  Chengdu, China
  Nov. 2015

- **Student Innovative Annual Excellent Project**
  at SWUN
  Chengdu, China
  Jun. 2015

- **Sichuan Province Computer Production Competition**
  2nd Award
  Chengdu, China
  May 2015

- **China National Scholarship**
  at SWUN
  Chengdu, China
  Sep. 2014

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

Public Activities

- **Student Volunteer**
  at Conference Smart Graphics 2015

  Chengdu, China
  Aug. 2015

- **Guigu Lab Team Leader**
  at SWUN

  Chengdu, China
  Sep. 2014 – Jun. 2015

- **Mathematical Modeling Association Academic Vice Director**
  at SWUN

  Chengdu, China
  Oct. 2012 – Jun. 2014

Personal Interests

- **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

- **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