

Ou Changkun

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Curriculum Vitae

Science and art, life in between

Education

- **University of Munich (LMU)** Munich, Germany
Master of Science in Computer Science; current GPA: 2.14/1.00 Apr. 2018 – Present
- **University of Munich (LMU)** Munich, Germany
Master of Science in Human-Computer Interaction; current GPA: 2.14/1.00 Oct. 2016 – Present
- **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 Sep. 2012 – Jul. 2016

Selected Skills

- **Languages:** go; python; javascript (typescript); c/c++ (for optimization); obj-c; swift; markdown; \LaTeX ; Native Chinese Speaker; Professional Fluent English; Elementary German
- **Systems/Tools:** General Linux DevOps; Docker; AWS/AlibabaCloud; MySQL/MongoDB
- **Frameworks:** sklearn/tensorflow/keras/pytorch/opencv/numpy/matplotlib, flask, vue/angular/electron/jquery, node/express, beego/gin-gonic
- **Experienced Fields:**
 - **Human side:** Ubiquitous Interaction Techniques; Large-scale User Study; Quantified User Experience; Website Prototyping; Crowdsourcing in Human Computation; Social Psychology
 - **Machine side:** Statistical Learning Theory (specialize in PAC-Bayes); Computer Vision (specialize in Convolutional Network methods); Nature Language Processing (specialize in Recurrent Network methods); Distributed Computing; High Performance Computing; Compiler Technique
 - **Mathematics:** Functional Analysis; Stochastic Process; Probability in Banach Spaces; Elementary Number Theory; Formal Logic and Proof
- **Certificates:** Coursera, Andrew Ng: [Deep Learning Specializations](#), certificates: [1](#), [2](#), [3](#), [4](#), [5](#)

Publications

- Changkun Ou. *On the development of Quantified UX Metric*. Github, 2018 [English](#).
- Changkun Ou. *C++11/14/17 On the Fly: The Fastest Guide towards Modern C++*. Github **2.5k+ Stars**, 2018 [English](#), [Chinese](#).
- Changkun Ou. *An Introduction to Recent Mobile Affective Inference Techniques: Methods, Applications and Challenges*. Advanced Seminar Media Computer Science, IFI LMU, 2018. [English](#), [Slides](#).
- 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](#).
- 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. *The Fastest Guide of C++11/14*. 2016, [Simplified Chinese](#), [Source Code](#)
- 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. *Mathematical Modelling Tutorial (Mandarin Chinese Video Series)*. 2016, [YouTube Playlist](#)
- 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](#)

Recent Work Experiences

- **LabEx** Munich, Germany
Backend Engineer (Remote) Mar. 2018 – Present
 - **Backend:** Beego/gin, Automated Cloud Resource Access Management Microservices (Alibaba Cloud + AWS)
- **Academic Tutor** Munich, Germany
LMU Lecture “Machine Learning” SoSe 2018 Aprl. 2018 – Jul. 2018
- **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
 - **General Web Development:** Angular; Spring; WebSocket; MongoDB; Elasticsearch; Serverless

Selected Open Projects

- **Open Source Projects:** [changkun@GitHub](#)
- **Translation Works** Apr. 2017 – Present
includes English and Chinese
 - **Juejin@Xitu Translator Member:** The largest EN-CN open source translation community in the word. Involved in [gold-miner](#), [tensorflow](#) projects. [2017 TOP10 Contributors](#)
 - **Personal Translations:** [List of works](#)
- **Haggles** Nov. 2017 – Present
Personal Kaggle solutions
 - **Technology Stack:** TensorFlow, Keras, Scikit-Learn
- **Quantified UX Metrics** Munich, Germany
Website development Nov. 2017 – Apr. 2018
 - **Technology Stack:** Vuejs, Expressjs, D3js
 - **Description:** A product UX evaluation tool
- **Gitchain** Munich, Germany
Cryptocurrencies prediction Nov. 2017
 - **Technology Stack:** Scikit-Learn
 - **Siemens AILab Hackathon 2nd Winner Project:** Predict the success of a new cryptocurrency via its source code.

- **Machine Translation Detection** Huaihua, China
Website development *Sep. 2017*
 - **Technology Stack:** Expressjs, Vanilla HTML/CSS/JS
 - **Description:** Detect whether a text is translated by machine traslation or not
- **Amazon Echo Skill** Munich, Germany
Voice assistant *Apr. 2017 - Aug. 2017*
 - **Tech Stack:** Python, Flask, Flask-Ask, Amazon Serverless, MongoDB
 - **Description:** A voice assistant for english learner.
- **UniWorX Monitor** Munich, Germany
Website development *Mar. 2017*
 - **Tech Stack:** Python, Polymer, Express, Electron
 - **Description:** An unofficial LMU UniWorX Course System with new courses notifications
- **Smart Watches Contact-free Control Modalities** Chengdu, China
Bachelor Thesis *Apr.2016 – Jun.2016*
 - **Tech Stack:** Swift, Node.js, Web Socket, watchOS, iOS, Leap Motion, Git
 - **Description:** Developed an alternative way – midair gesture control – to operate smart watches

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
for Conference Smart Graphics 2015 *Aug. 2015*
- **SWUN Guigu Lab Team Leader** Chengdu, China
Tutorial for members applying projects *Sep. 2014 – Jun. 2015*
- **Mathematical Modeling Association Academic Vice Director** Chengdu, China
Academic tutorial for new members *Oct. 2012 – Jun. 2014*