

Ou Changkun

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Education

- **University of Munich (LMU)** Munich, Germany
Master of Science in Human-Computer Interaction; GPA: 2.24/1.00 Oct. 2016 – Present
- **University of Electronic Science and Technology of China (UESTC)** Chengdu, China
Master of Engineering in Software Engineering Aug. 2016 – Sep. 2016
- **University of Munich** Munich, Germany
Exchange Student in Media Computer Science 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 Sep. 2012 – Jun. 2016
- **COURSERA** MOOC platform
Andrew Ng: Deep Learning Specializations, certificates: [1](#), [2](#), [3](#), [4](#) Oct. 2017 – Nov. 2017

Work Experience

- **MagicLingua** Munich, Germany
Fullstack Engineer (Freelance) Apr. 2017 – Present
 - **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
- **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
 - **Desktop Client:** Electron based development for macOS/Windows/Linux
 - **Document Writing:** C++ 11/14 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

Selected Projects

- **UniWorX Monitor** Munich, Germany
Personal Project Mar. 2017
 - **Tech Stack:** Python, Polymer, Node.js Express, Electron
 - **Description:** Developed an unofficial better LMU UniWorX System with new courses notifications
- **Munich Renting Tool** Munich, Germany
Personal Project Oct. 2016
 - **Tech Stack:** JavaScript, Python, Google Map API, BeautifulSoup4
 - **Description:** A location visualization tool for Munich Studentenwerk private savings
- **Designing Alternative Contact-free Control Modalities for Smart Watches** 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

- **Implementation of Interaction Perception Center** Chengdu, China
SWUN National Student-Innovative Project at SWUN Guigu Lab Apr. 2014 – Apr. 2015
 - **Responsibility:** Team leader and development
- **Research on Spetical Interaction** Chengdu, China
SWUN Normal Student-Innovative Project at SWUN Computer Vision Lab Jun. 2013 – Dec. 2013
 - **responsibility:** Team leader and development
- **More Open Source Projects:** github.com/changkun

Skills

- **Languages:** python; javascript; c; c++; obj-c; swift; markdown/pandoc; L^AT_EX; Native Chinese Speaker; Professional Fluent English; Elementary German
- **Systems/Tools:** Mac user; General Linux DevOps; Docker; AWS/DigitalOcean/Aliyun; SQL/MongoDB; zsh/tmux/vim/vscode
- **Frameworks:** numpy/opencv/matplotlib/sklearn/tensorflow, flask, jquery/react/vue/polymer/electron, node/express
- **Knowledges:**
 - **Human Side:** Human-Computer Interaction; User Study; User Experience; Product Prototyping; Human Computation; Social Psychology
 - **Machine Side:** Machine Learning; Recommendation System; Big Data Mining; Computer Vision; Distributed Computing; Compiler Technique; System Architecture
 - **Mathematics:** Functional Analysis; Stochastic Process; Analytic Number Theory; Formal Logic and Proof

Publications

- Changkun Ou. *Understanding Generalization in Deep Neural Networks*. Advanced Seminar Deep Learning, IFI LMU, 2018. Inprogress.
- Changkun Ou. *An Introduction to Recent Mobile Affective Inferring Techniques: Methods, Applications and Challenges*. Advanced Seminar Media Computer Science, IFI LMU, 2018. Inprogress.
- 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*. Lercture Advanced Topics in HCI, IFI LMU, 2017. In Proceedings.
- Changkun Ou, Yifei Zhan, Zhe Li. *A Novel GWAP Disaster Monitoring System*. Lercture 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 Modeling 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](#)

Honors & Awards

- **Siemens AILab Hackathon** Munich, Germany
Second Winner Nov. 2017
- **App@Night 2016 hackthon at University of Munich** Munich, Germany
IBM IoT team Successful Participant Nov. 2016
- **hackaTUM at Technical University of Munich** Munich, Germany
Landeshauptstadt Muenchen Successful Participant Nov. 2016
- **China National Scholarship** Chengdu, China
At UESTC Sep. 2016
- **SWUN Bachelor Graduation Thesis Award** Chengdu, China
Excellent Thesis Jun. 2016
- **Sichuan Province University Graduates Award** Chengdu, China
Outstanding Student Jan. 2016
- **First-class Scholarship** Chengdu, China
SWUN Outstanding Student Nov. 2015
- **SWUN College Student-Innovative Activity 2014** Chengdu, China
Annual Excellent Project Jun. 2015
- **The National College Student-Innovative Projects** Chengdu, China
Concluding Certificate Jun. 2015
- **Sichuan Computer Production Competition** Chengdu, China
2nd Award May 2015
- **First-class Scholarship** Chengdu, China
SWUN Outstanding Student Nov. 2014
- **China National Scholarship** Chengdu, China
At SWUN Sep. 2014
- **Sichuan Computer Production Competition** Chengdu, China
2nd Award Jun. 2014
- **Mathematical Contest in Modeling(MCM) 2014** Chengdu, China
Meritorious Winner Apr. 2014
- **First-class Scholarship** Chengdu, China
SWUN Outstanding Student Nov. 2013
- **Mathematical Contest in Modeling(MCM) 2013** Chengdu, China
Successful Participant Apr. 2013

Selected Public Activities

- **Juejin Translation Project** [GitHub](#)
 - Translator, articles translation from English to Chinese* *since Apr. 2017*
 - **Translation:** [How to build complex user interfaces without going completely insane](#)
 - **Proofreading:** [Everyone is a designer. Get over it.](#)
 - **Translation:** [How to pretend you're a great designer](#)
- **Personal Translation** *since May 2016*
 - Translation from English to Chinese*
 - **Leap Motion Official Development Documentation Translation:** full translation
 - **Swift 3 API Design Guidelines:** full translation
 - **The Swift Programming Language Chinese Translation:** responsible for Release Changes chapter
- **Academic Tutor** Chengdu, China
 - Cooperation lecture "Human-Computer Interaction I" between LMU and SWUN* *Jul. 2015*
- **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*
- **Computer Application and Development Association Core Member** Chengdu, China
 - Programming tutorial for new members* *Oct. 2012 – Dec. 2013*
- **SWUN Organization federation Executive Member** Chengdu, China
 - Design & Organization* *Oct. 2012 – Jun. 2013*