Changkun Ou

Resume

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Online version: https://changkun.de/s/resume

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Introduction

I am a Ph.D. candidate in human-computer interaction at the Institute of Informatics, LMU Munich (Germany). My research focuses on intelligent human-in-the-loop systems and develops machine learning algorithms to exploit human preferential behavior, then support their decision-making process for the greater good. In context, he utilizes efficient and robust engineering practices to explore system design trade-offs that can bring actual impact to real users.

Education

Ph.D. Candidate Media Informatics (Dr. rer. nat.)   **Feb. 2019 – Present**

LMU Munich   *Munich, Germany*

- **Advisors**: *Prof. Dr.-Ing. Andreas Butz (Erstberichterstatter), Prof. Dr. Eyke Hüllermeier (Zweitberichterstatter), Prof. Dr.-Ing. Marc Stamminger (Drittberichterstatter).*

Master Student Human-Computer Interaction (M.Sc.)   **Oct. 2016 – Jan. 2019**

LMU Munich; overall grade: 1.63 (max. 1.0) between "Very Good" and "Good"   *Munich, Germany*

- **Thesis**: *"Understanding and Predicting Web Browsing Behavior"*
- **Advisors**: *Dr. Daniel Buschek, Dr. Malin Eiband, Prof. Dr. Heinrich Hußmann*

Bachelor Student Computer Science and Engineering (B.Eng.)   **Sep. 2012 – Jul. 2016**

Southwest University for Nationalities; overall grade: 3.74 (max. 4.0), "Top 1" of 154 students   *Chengdu, China*

- **Thesis**: *"Designing Alternative Contact-free Control Modalities for Smart Watches"*
- **Advisor**: *Prof. Dr. Yaxi Chen*

Professional Experience

Software Development Engineer II   **Sep. 2022 – Present**

Sixt SE   *Munich Pullach, Germany*

- **As engineer**: design and developing automated pricing system to support price decisions

Research Associate   **Aprl. 2018 – Present**

LMU Munich   *Munich, Germany*

- **As researcher**: research on human-in-the-loop machine learning 3D graphics systems
- **As teacher**: teach 12 classes (as lecturer/instructor/assistant/tutor), and supervising 20+ student theses and seminars
- **As developer**: develop a 3D mesh processing backend system in collaboration with industry partner WAY digital solutions; develop, migrate, and maintain a 17 year-old university CMS system, and a 13 year-old collaborative system

Backend Software Engineer (Remote)   **Apr. 2018 – Jan. 2019**

LabEx Technology Ltd   *Munich, Germany*

- **As team leader**: leading developments of an oversea product; established microservice based backend architecture; the product autoscales cloud instances (on AWS/AlibabaCloud) ranging from 20 to 200; the product user group grows from 5k+ to 30k+ during my incumbency.
- **As developer**: 1) developed a scalable remote desktop proxy (support WebSocket to VNC/RDP/SSH protocols) using Go; 2) developed an automated multi-cloud resource management microservice that abstracts cross cloud providers (supports AWS/AlibabaCloud over 15 cloud products, e.g., IAM/EC2/VPC/etc), scales and used by 10k+ users; 3) developed a kubernetes-like container and instance hybrid management service.
- **Involved techniques**: Frontend: Vue, jQuery, Webpack, Electron; Backend: Go, Cgo, Gin, Beego, gRPC, MySQL, MongoDB, Redis, Hypervisor, Nginx, Docker, Kubernetes, AWS, AlibabaCloud, etc

Fullstack Engineer (Freelance)   **Nov. 2017 – Mar. 2018**

Rocketlingo UG   *Munich, Germany*

- **As developer**: developed a voice bot to support novice language learner to improve their language skills by real-time voice recognition and synthesis (supports web and Amazon Alexa), optimize for audio streaming and multilingual falt tolerances using machine learning
- **Involved techniques**: TypeScript; WebSocket; Angular; Google Cloud STT and TTS; Sklearn; Voice Recognition; etc

Open Source Activities and Organizations

I am enthusiastic about the open source movement and active in the Go community. A public statistics indicates that I have earned 20.8k+ stars, 14.9k+ total code commits, 20 contributed open source projects. A public contribution ranking indicates I am a **top-200 active user in Germany**. See github.com/changkun for more authored softwares (including frameworks/tools). Here lists a few selected activities and organizations:

- **Go (organization member)**: an open sourced programming language developed by a team at Google, and have approx. 2 million developer users in the globe. I am one of the official Go organization member (163 people in total), current maintainer of x/mobile repository, active contributor to language runtime and standard library.
- **fyne (organization member)**: an open sourced cross platform GUI framework written in Go, and I am one of the organization member (12 people in total), mainly contributing to graphics and mobile drivers, performance improvements.
- **The golang.design Initiative (founder)**: I created the organization. The organization currently hosts 25 software projects and 6 core members. The organization website have 465k+ page views and 66k+ historical viewers in total since Sep 2020.
- **The TalkGo community (organization member)**: I am a core member of the organization. The community organizes weekly public tech talks, currently have 6.35k+ subscribers, organized 132 public talks. I contributed 7 talks, and they are one of the most viewed talks.
- **Juejin Translation Community (organization member)**: Major contributor, translated 50+ articles from English to Chinese.
- **Occasional contributions**: Tensorflow (164+ stars), etcd (39.6k+ stars), etc.

Expertise and Skills

Expertise is context- and comparison-dependent. Here states the years of experience in terms of use, also indicates an estimation of the level of expertise (either *intermediate*, *experienced*, or *expert*):

- **Domain**: *Computer graphics* (3D rendering and geometry processing, 3 years of Bachelors level teaching at university, 2 years of Masters level teaching, Blender/OpenGL/Metal/three.js, *experienced*); *Machine learning* (1 year of Masters level teaching at university, Andrew Ng's Deep Learning Specialization Certificate (ID: QGH8ZVJ6J2L2), Sklearn/Tensorflow/PyTorch/etc, *experienced*); *Data analysis* (3 years of PhD research, numpy/seaborn/pandas/etc., *experienced*); *Web development* (2 years of industrial backend engineering, Go/React/etc., *experienced*).

- **Language**: *Go* (5 years+, *expert*); *Python* (4+ years, *experienced*); *JavaScript/TypeScript* (5+ years, *experienced*); *C/C++* (2+ years, *intermediate*); *LaTeX* (10+ years, *intermediate*). I speak native Mandarin; fluent professional English; elementary German.

Scholarships and Awards

ACM Symposium on Virtual Reality Software and Technology	**Nov. 2022**
Best Paper Award	
ACM SIGCHI Mensch und Computer	**Sep. 2022**
Honorable Mention Award	
ACM SIGCHI Special Recognitions (CHI '20)	**Nov. 2019**
Outstanding Reviews	
Siemens AILab Hackathon	**Nov. 2017**
2nd Winner	*Munich, Germany*
China National Scholarship	**Sep. 2016**
University of Electronic Science and Technology of China	*Chengdu, China*
Excellent Bachelor Thesis Award	**Jun. 2016**
Southwest University for Nationalities	*Chengdu, China*
Best University Graduates Award	**Jan. 2016**
Sichuan Province	*Chengdu, China*
China National Scholarship	**Sep. 2014**
Southwest University for Nationalities	*Chengdu, China*
Meritorious Winner in American Mathematical Contest in Modeling (MCM' 14)	**Apr. 2014**
Southwest University for Nationalities	*Chengdu, China*