



🏠 Peter-Fischer-Allee 23 ✉ mail@maoyin.eu
65929 Frankfurt am Main 📞 +49 1525 6965008
🌐 <https://maoyin.eu> 📞 +86 1554 1110411

Maoyin Sun

Chemnitz University of Technology, Faculty of Computer Science

2016–2024, *Master of Science*, Web Engineering, Chemnitz, Germany.

Distinction: Gut

Degree focus: Systematic and quantifiable approaches to the design, implementation, and operation of web-based solutions

Thesis: *System Design, Implementation and Evaluation of a User-Centered Application for Indoor Sound Classification*. Supervisor: Prof. Danny Kowerko and Arunodhayan Sampathkumar

Keywords: system design, user experience, asynchronous messaging, decoupled architecture, high availability, low-latency streaming, acoustic event classification, deep neural networks

Ocean University of China, School of Mathematical Sciences

2011–2015, *Bachelor of Science*, Information and Computing Science, Tsingtao, China.

Grade Point Average: 3,2 (*modified Bavarian formula*)

Degree focus: Mathematics, numerical analysis, mathematical modeling, high-performance computing, information theory, and cryptography

Thesis: *An E-voting System Based on Cryptology*. Supervisor: Prof. Jingliang Zhang

Keywords: cryptography, VLR group signature, DTDH Assumption, E-voting, online certificate revocation, algorithm design

Chinese University of Hong Kong, Business School

2012, *Asia-Pacific Business Talent Exchange Programme*, Hong Kong, China.

Studied basic subjects in commerce, finance and business management and analyzed special cases of recent global financial crisis.

Robert Bosch GmbH, Division of Cross-Domain Computing Solutions

2022–2023, *Working Student*, Leonberg, Germany.

Designing and developing **lossless and near-lossless compression algorithms** in C++

- Developed lossless and near-lossless image compression softwares for image-based sensors and assessment tools (C++, Computational photography, Computer vision, ADTE, ADAS);
- Set up knowledge management system **deployment pipeline** for **architecture descriptions** with bug fixing of upstream open source projects (Ruby, Gradle, docToolchain, arc42).

Union Investment, Department of Investment Controlling System

2019–2021, *IT Inhouse Consultant Internship & Working Student*, Specialist for Risk Controlling & Performance Analysis, Frankfurt am Main, Germany.

Responsible for the operation and further development of SS&C Algorithmics and Ortec Pearl (Python, JavaScript, C, Go, Bash, Perl, Oracle DB, Java)

- Created a **parser** to analyze the dependencies of **4.000+ legacy code files** and furthermore provided an interactive visualization and basic **static analysis** (Python, JavaScript, D3.js);
- End-to-end delivered a **new Prometheus-Grafana monitoring system** and implemented exporters which reduced the latency to 200 μ s (1/150.000). The entire software lifecycle was taken into account throughout the process. (C, Go, Python, Bash, PromQL);
- Implemented new **VaR models** and **stress test scenarios**, fixed, maintained and improved legacy code i.g. reduced the memory consumption of a script to **10%** (from 3.1TB to 300GB) without affecting performance, making it feasible to include more data (Perl, Oracle DB);
- Developed bash utilities and visualizations for various analysis including **NUMA tuning**, **Java GC tuning**, and **PL/SQL tuning**, implemented a general sandbox for testing in a clean environment (Bash, Java, Oracle DB, JavaScript, D3.js, etc).

EDUCATION

EXPERIENCE

Chemnitz University of Technology, Faculty of Computer Science

2017, *Research Assistant*, Chemnitz, Germany.

An interdisciplinary research in the *CrossWorlds* graduate school on cognitive and developmental psychology, HCI and system implementation (VR, Unity3D, C#, JavaScript).

Silicon Spread Corp., Department of Marketing

2016, *Internship*, Dalian, China.

Independently redesigned its website (PHP, HTML, CSS, SVG, JavaScript, Vue.js).

Lazywrt.org

2013–2014, *Co-Founder & Front-end Developer*, Tsingtao, China.

Designed and developed Lazywrt Wi-Fi router and its **firmware** and Franz Open-Advertising Wi-Fi AP Cloud Management Service (OpenWrt, C, Lua, Python, HTML, CSS, JavaScript).

Prudential plc

2012, *Personal Financial Planning and Analysis Internship*, Hong Kong, China.

Learned and practiced basic knowledge of planning, forecasting and analysis, as well as team working skills on personal finance consulting.

Competitive Programming Contests

2012–now, multiple locations. Selected awards:

- The 1st place at 31st Classic Coding Contest 2019 Frankfurt am Main, Germany;
- The 3rd place, teamed, at 30th Classic Coding Contest 2019 Salzburg, Austria;
- Silver Medal, teamed, 2014 ACM-ICPC Shandong Provincial Programming Contest, China;
- Honorable Mention, teamed, 2013 ACM-ICPC Asia Regional Contest Nanjing On-site, China.

Cyber Security Contests

2014–now, multiple locations. Selected awards:

- Participation, Randomly teamed, KfW Code Blue Challenge 2023, Germany;
- The 1st place, randomly teamed, at IAV Security Hackathon Braunschweig 2019, Germany;
- Second Prize, teamed, Qingdao Collegiate Cyber Security Contest 2014, China.

Association for Computing Machinery

2014–2016, *Awarded Student Membership*.

Mathematics Contests in Modeling

2012–2013, multiple locations. Selected awards:

- Honorable Mention, teamed, the 2013 Mathematical Contest in Modeling, global online;
- First Prize, teamed, 2012 China Undergraduate Mathematical Contest in Modeling.

Ocean University of China, Student Societies

2011–2014, *President*, CoYouth Club, Tsingtao, China.

Held and coached programming contests, hosted tech workshops (e.g. Software Freedom Day) and provided various IT services.

2012–2014, *Vocal Percussionist*, Students Art Troupe, Tsingtao, China.

2011–2013, *Head of IT Department*, Student Union, Tsingtao, China.

Built and maintained the official website, set up and operated social media accounts, and worked on the book *Ten Years Review of Student Union OUC*.

Languages Spoken

- **Chinese:** Native speaker
- **English:** Professional working proficiency
- **German:** Limited working proficiency
- **JavaScript:** „Native speaker“