JINGREN WANG

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EMPLOYMENT

R&D Logic Synthesis Engineer
Raina Technology

📅 Sep 2022 – Present   📍 Hangzhou, Zhejiang, China

- Mainly responsible for design and implementation of **combinational logic synthesis** in our product.
- Familiar with algorithm in **Berkeley's ABC and EPFL's mockturtle**, tracking most of the update regularly, know the framework of **Yosys**, especially on combinational logic synthesis.
- Know how to modify internal data structure such as AIG/BLIF/SOP/TT to optimize the design.
- Experienced in implementing/adapting research work from IWLS/ICCAD to improve our own (QoR)PPA while making sure LEC passes.
- Constructed a system for structure monitoring and decision making during the process of optimization.
- Familiar with **Cadence Conformal® Equivalence Checker** (Version 19.10).

Research Assistant
School of Computing Science, University of Glasgow

📅 Feb 2022 – July 2022   📍 Glasgow, Scotland, UK

- Responsible for communication between VR device and ROS, which helps control UR3E robotic arm in virtual space and synchronize them in real time.

Research Assistant
School of Cyber Engineering, Xidian University

📅 Jul 2020 – Nov 2020   📍 Xi'an, Shannxi, China

Software Engineer Intern
Chinese Academy of Sciences

📅 Jul 2019 – Aug 2019   📍 Beijing, China

SKILLS

- Programming Languages: `Python` `C` `C++` `Haskell`

- Development Tools: `Emacs` `VScode` `Git` `valgrind` `gdb/lldb` `Ubuntu` `CentOS`

- Familiar with python, could use python do data analysis and visualization, which summarize the performance on benchmarks after synthesis.
- Familiar with profiling/debugging tools such as Valgrind (memcheck especially) and GDB, helps prevent memory leak and memory error during development.
- Understand VCS, good at Git, have experience in Git for over 6 years.

PROJECTS

Implementing System T in Haskell
School of Computing Science, University of Glasgow

📅 Jul 2021 – Dec 2021   📍 Glasgow, Scotland, UK

- Master's project: ⌨ wjrforcyber/SystemT
  Thesis: 🌐 wjrforcyber.github.io/files/ISIH.pdf
- Designed and implemented a bidirectional type system and evaluator for a programming language with higher order functions and recursion.
- `Haskell` `type systems` `formal methods` `Prettyprinter` `Quickcheck` `Crteria benchmark`
- Awarded the highest grade.
- PLUG talk Slides: 🌐 wjrforcyber.github.io/files/PLUGTalk.pdf

Save the Scran
Google Developer Student Clubs

📅 Feb 2021 – Aug 2021   📍 Glasgow, Scotland, UK

- 2021 Solution Challenge "The 17 Sustainable Development Goals of the United Nations".
- Developed an Android app which helps reduce food waste. Project: ⌨ Yog3sh56/save-the-scran
- Responsible for product design, Firebase implementation, News API Settings, Barcode Scan and Text Recognition.
- `Flutter` `Firebase` `Cloud Firestore` `Firebase Cloud Messaging` `Firebase Cloud Storage`
- Ranked in the **Global Top 50 (out of around 865)**.

EDUCATION

M.Sc. in Computing Science
School of Computing Science, University of Glasgow

📅 Jan 2021 – Jan 2022

- Qualified With Merit
- Thesis: Implementing System T in Haskell
- Selected Courses: Machine Learning, Data Science, Deep Learning, Text as Data, Human-ordinateur Interaction

B.Sc. in Network Engineering
School of Cyber Engineering, Xidian University

📅 Sep 2016 – Jul 2020

- Excellent Engineer Program
- GPA: 3.5/4