

Tianyi Gao

CONTACT INFORMATION	Informatics Forum, 10 Crichton Street Edinburgh, UK, EH8 9AB	tianyi.gao@ed.ac.uk tianyigao.net
INTERESTS	Computer Networks and Operating Systems	
EDUCATION	University of Edinburgh Ph.D. in Informatics <ul style="list-style-type: none">• Supervisor: Michio Honda	Edinburgh, UK Dec. 2022 - Present
	University of Edinburgh M.S. in Computer Science, Distinction <ul style="list-style-type: none">• Rank: Top 1 (Class Prize awarded)• Thesis: Securing the Homa Transport Protocol• Key Courses: Computer Architecture and Design, Parallel Architecture, Security Engineering, Extreme Computing, Advanced Database Systems, Machine Learning Practical	Edinburgh, UK Sept. 2021 - Sept. 2022
	University of Nottingham B.S. in Computer Science w. Artificial Intelligence, 1st Class	Ningbo, China & Nottingham, UK Sept. 2017 - August 2022
COMPUTER SKILLS	Programming Languages (Proficient) C; (Competent) Python, Java; (Beginner) C++, Rust, GoLang, Solidity, Scala, SQL, Verilog Tools & Software Linux System Administration, Shell, Git, L ^A T _E X, Docker, PyTorch	
HONORS, AWARDS, SCHOLARSHIPS	Computer Science MSc Class Prize (Highest Overall Mark), University of Edinburgh Informatics Graduate School PhD Scholarship (<i>GBP £145,838</i>), University of Edinburgh Nottingham Advantage Award, University of Nottingham Vice-Chancellor's Medal (Xiaoshan UNNCer Team), University of Nottingham Dean's List (<i>CNY ¥6,000</i>), University of Nottingham Head's List (<i>CNY ¥3,000</i>), University of Nottingham Outstanding Volunteer, University of Nottingham	2022 2022 2021 2019 2019 2018 2018
TALKS	HomaLS: Tunneling Messages through Secure Segments Netdev 0x16, The Technical Conference on Linux Networking	[Web] [Video] [Slides] Lisbon, Portugal
WORKING EXPERIENCE	Advanced Institute of Information Technology, Peking University <i>System Software Engineer, Internship</i> <ul style="list-style-type: none">• Improved the Groth16 algorithm efficiency using three techniques: 1. NUMA affinity optimization and removal of unnecessary security features; 2. Code optimization and sparse array compression; 3. Integration of the state-of-the-art GPU computation algorithm on the mathematical operator (multi-exp) Proof generation decreased from 52 minutes to 22 minutes, and physical memory footprint decreased from 190 MiB to 80 MiB on E5-2678v3x2 machines;• In the project of developing a platform for place and route (P&R) processing with Electronic Design Automation (EDA) tools, I developed an agent software in GoLang, which receives jobs,	Hangzhou, China June 2020 - Nov. 2020

and launches EDA tools and uploads the results to file servers. That agent is currently being used in production;

(Supervised by Professor Guangyu Sun)

Zhejiang Intelligent Robot Research Institute

AI Software Engineer, Internship

Hangzhou, China

June 2018 - July 2018

- Developed a C/S Python program for face recognition based on Google's open-source FaceNet. The client collects face data using OpenCV and sends the data to the server over TCP; the server train the data for further face data analysis;
- Built a simple speech robot program through iFlytek's API platform.