

Zhifei Yang (杨志飞)

Personal Information

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🏠 Peter-Debye-Weg 17.306, 8049 Zürich, Switzerland

♥ Programming, Piano, Writing, Swimming

💻 <https://github.com/Xivid>

Research Interests

- Cloud & Edge Computing and Datacenter Infrastructure
- Systems for Modern Data Processing and Machine Learning

Education

EPFL

PhD Student in Computer and Communication Sciences

Lausanne, Switzerland

Sep. 2021 ~

- Awarded the EDIC Fellowship

ETH Zurich

Master Student, Department of Computer Science

Zurich, Switzerland

Sep. 2017 ~ Aug. 2020

- GPA: 5.59/6.00, Supported under the Master Scholarship Programme

The University of Hong Kong

Exchange Student, Department of Computer Science

Hong Kong, China

Aug. 2015 ~ Jan. 2016

- GPA: 4.0/4.3, Awarded the Fung Scholarship as a Fung Scholar

Harbin Institute of Technology

Bachelor, Computer Science Honors Class

Harbin, China

Aug. 2013 ~ Jun. 2017

- Major GPA: 91.11/100, Ranking: 11/225

Publications

Hai Duc Nguyen, Zhifei Yang, Andrew A. Chien. 2021. **Motivating High Performance Serverless Workloads**. *The 1st Workshop on High Performance Serverless Computing (Held in conjunction with ACM HPDC 2021)*

Experiences

Large Scale Sustainable Systems Group, UChicago

Chicago

Supervisor: Prof. Andrew Chien

Sep. 2020 ~ May 2021

- Designed a serverless software architecture for LHC event filtering at CERN
- Contributed to Real-time Serverless: enabling invocation rate guarantee for FaaS

Master Thesis, Systems Group, ETH Zurich

Zurich

Supervisor: Zhenhao He, Prof. Gustavo Alonso

Feb. 2020 ~ Aug. 2020

- Built a **distributed group-by query accelerator** for RDMA-capable FPGA cluster

Research Intern, Systems Group, ETH Zurich

Zurich

Supervisor: Dr. David Sidler, Prof. Gustavo Alonso

Jun. 2019 ~ Nov. 2019

- Built a **FPGA accelerator for B-Tree index query over RDMA** network

Research Intern, Systems Group, ETH Zurich

Zurich

Supervisor: Dr. Muhsen Owaida

Jun. 2018 ~ Sep. 2018

- Analyzed various data mining algorithms and abstracted out a **sub-operators** library
- Explored sub-ops scheduling optimization on heterogenous computing platforms

Research Intern on CTA Strategy, Shanghai Cedar Capital

Shanghai

Mentor: Dr. Juanjuan Xiang and Dalong Cheng

Jul. 2017 ~ Aug. 2017

- Researched and developed several popular **quantitative trading** strategies
- Delivered code that serves the company's major data processing flow

Research Intern, Systems Research Group, Microsoft Research Asia **Beijing**
Mentor: Dr. Hucheng Zhou and Dr. Lintao Zhang *Jul. 2016 ~ Apr. 2017*

- Developed **FastTree**: a distributed gradient boosting decision trees trainer over a RDMA collective communications library, applied novel system-level and algorithm optimizations to perform over state-of-the-art frameworks
- Surveyed, proposed and evaluated technical plans for building wireless virtual reality goggles, developed an VR chatting demo integrating Microsoft Cognitive Service and Microsoft XiaoIce ChatterBot

Lab Member, HIT IBM Technology Center **Harbin**
Advisor: Jin Wu, Laboratory Director *Jul. 2014 ~ Jun. 2016*

- Worked on “*Linux Spotlight*”, “*Bitcointalk Forum Spider and Data Analysis*” and “*Human body tracking with unmanned aerial vehicle*” among other projects
- Served as the host of Software Freedom Day 2014 Harbin Site, co-founder of HIT Linux OS Club and member of HIT IBM Technology Club

T.A. of The C Programming Language, Spring 2015, HIT **Harbin**

T.A. of High-Level Programming Language: Python, Autumn 2014, HIT **Harbin**

Selected Awards

Crerar Fellowship, University of Chicago Department of Computer Science *Sep. 2020*
Master Scholarship, ETH Department of Computer Science *Sep., 2017*
National Scholarship, China (highest scholarship in China) *Oct. 2016*
Prize of Excellence in ASC16 Student Supercomputer Challenge *Mar. 2016*
CCF Outstanding Undergraduate Award (103 undergraduates in China) *Oct. 2015*
National Endeavor Scholarship, China (top 2% in HIT) *Oct. 2015*
Fung Scholarship, The University of Hong Kong *Sep. 2015*
First Class Scholarship, HIT (top 3% in HIT) *Sep. 2015*
Merit Student, Heilongjiang Province (top 1% in Heilongjiang province) *Mar. 2015*
Second Prize, ACM/ICPC Programming Contest Heilongjiang Province *May 2014*
First Class Scholarship, HIT (top 3% in HIT) *Mar. 2014*

Selected Activities

Gave a **talk on FPGA** at Fung Scholars Leadership Conference in Shanghai *Nov. 2019*
Attended **Fung Scholars Leadership Conference** in Hong Kong *Oct. 2016*
Completed **Visual Computing Summer School** of Shandong University *Jul. 2016*
Selected into **MSRA Pre-PhD Class** (6 in HIT) *Jun. 2016*
Attended **Fung Scholars Leadership Conference** in Singapore *Oct. 2015*
Presided **Software Freedom Day**, Harbin Site *Sep. 2014*
Completed **HIT-IBM Lab Hackathon** with *Linux Spotlight* *Jul. 2014*
Created **HIT Piano Club** and Organized the **Summer Piano Concert** *Jul. 2014*
Completed **HIT Outstanding Students Training Camp** (top 1% in HIT) *Jul. 2014*
Selected into **National Experimental Plan on Elite Students Training in Basic Disciplines** *Feb. 2014*

Programming Skills

System Programming: C, C++, Shell, VHDL, Verilog, HLS, Rust
Application Development: C#, Java, Python, Haskell, PHP, SQL
