

Guanzhou Hu

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EDUCATION

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| ShanghaiTech University <i>Candidate for B.E., Computer Science and Technology</i> | <i>Sep 2016 - Jul 2020</i> <i>Shanghai, China</i> |
| <ul style="list-style-type: none">GPA: 3.9 / 4.0 (rank 2 / 183)Honors: Dean's Scholarship (2019), President's Scholarship (2017, 2018), Outstanding Student (2017, 2018)Relevant coursework: Computer Architecture III, Compilers, Parallel Computing | |
| Massachusetts Institute of Technology <i>Undergraduate Special Student, Computer Science</i> | <i>Sep 2019 - Jun 2020</i> <i>Cambridge, MA, USA</i> |
| <ul style="list-style-type: none">Relevant coursework: Distributed Systems Engineering, Computer Networks, Computer Systems Security | |

RESEARCH EXPERIENCE

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| Affordable AI: Cost-Efficient & Scalable Graph Convolutional Networks Computing Framework with the Aid of Serverless (Lambda) Computing | <i>Jul 2019 - Oct 2019</i> <i>Los Angeles, CA, USA</i> |
| <i>CSST Research Intern, University of California, Los Angeles, with Prof. Harry Xu</i> | |
| <ul style="list-style-type: none">Integrated new and emerging <i>serverless computing</i> techniques into traditional graph computing to build an affordable, efficient, and highly-scalable graph convolutional networks (GCNs) computing platform without expensive dedicated GPUs.Implemented the first workable prototype with AWS Lambdas service, and reached linear scalability and 100% cost-efficiency. | |
| NcTrace: Optimized Trace Data Storage with the netCDF Format | <i>Mar 2019 - Aug 2019</i> <i>Shanghai, China</i> |
| <i>Leader of project team, ShanghaiTech University, L.I.O.N group, with Prof. Shu Yin</i> | |
| <ul style="list-style-type: none">Optimized the storage of comma-separated values (CSV) trace data using the netCDF I/O library. Introduced the "dimension packing" storage model which reduces the file size and accelerates users' analysis tasks.Tested with Google cluster traces, and achieved 7:1 size reduction with 2 orders of magnitude acceleration on reading. | |
| Active I/O: High-Performance Parallel Content-aware Storage System | <i>Jan 2019 - Aug 2019</i> <i>Shanghai, China</i> |
| <i>Research Assistant, ShanghaiTech University, L.I.O.N Group, with Prof. Shu Yin</i> | |
| <ul style="list-style-type: none">Designed a high-performance, parallel file system named RosFS. It aims to dig out the "content locality" within highly-structured data formats, by clustering data by topics and providing users a better locality when operating on a subset of topics.Tested with Robot Operating System bag files, and achieved 6.5x performance improvement on opening and at least 1.4x on reading. | |

PUBLICATIONS & PATENTS

- Yin, S. and Hu, G. 2019. *A Storage System Management Policy Based on Data Content Locality*. CN. Patent application 201910499391.9, filed in June 2019. Patent pending.

TEACHING EXPERIENCE

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| Teaching Assistant in Computer Architecture <i>School of Information Science and Technology, ShanghaiTech University</i> | <i>Feb 2019 - Apr 2019</i> <i>Shanghai, China</i> |
| Teaching Assistant in Operating Systems <i>School of Information Science and Technology, ShanghaiTech University</i> | <i>Sep 2018 - Jan 2019</i> <i>Shanghai, China</i> |
| <ul style="list-style-type: none">Guided semester-long course projects on the PintOS system kernel from Stanford CS140. | |
| Teaching Assistant in Discrete Mathematics <i>School of Information Science and Technology, ShanghaiTech University</i> | <i>Mar 2018 - Jul 2018</i> <i>Shanghai, China</i> |

PRIZES & AWARDS

- Outstanding Research Award, CSST Program 2019, University of California, Los Angeles *Sep 2019*
- Second Class Prize, ASC Supercomputing Cluster Competition 2019 (team leader) *Mar 2019*
- Outstanding Teaching Assistant Award, School of Information Science and Technology *Jan 2019*
- Meritorious Winner, Mathematical Contest in Modeling (MCM) 2018 *Apr 2018*

MISCELLANEOUS

- Skills:** System programming, C/C++, Rust, Go, Python, Linux server dev/ops, MIPS