

Yiping Kang

yipingkang93@gmail.com

yipingkang.org

EDUCATION

- 2014 - 2018 The University of Michigan, Ann Arbor, MI USA
Ph.D.
Advisors: Lingjia Tang, Jason Mars, Trevor Mudge
Thesis: *From Compute to Data: Across-the-Stack System Design for Intelligent Applications*
- 2014 - 2016 The University of Michigan, Ann Arbor, MI USA
M.S. in COMPUTER SCIENCE AND ENGINEERING
GPA: 3.9/4.0
- 2012 - 2014 The University of Michigan, Ann Arbor, MI USA
B.S in COMPUTER ENGINEERING
GPA: 3.9/4.0
- 2010 - 2012 Shanghai Jiaotong University, Shanghai, China
B.S in ELECTRICAL AND COMPUTER ENGINEERING
GPA: 3.7/4.0

PUBLICATIONS

Data Collection for a Production Dialogue System: A Clinc Perspective
Yiping Kang, Yunqi Zhang, Jonathan K. Kummerfeld, Parker Hill, Johann Hauswald, Michael A. Laurenzano, Lingjia Tang, Jason Mars
In Proceedings of the 16th Annual Conference of the North American Chapter of the Association of the Computational Linguistics (NAACL), New Orleans, Louisiana, USA, 2018

Neurosurgeon: Collaborative Intelligence Between Cloud and the Mobile Edge.
Yiping Kang, Johann Hauswald, Cao Gao, Austin Rovinski, Trevor Mudge, Jason Mars, Lingjia Tang
In Proceedings of the 20th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS) 2017

Designing Future Warehouse Scale Computers for Sirius, An End-to-End Voice and Vision Personal Assistant.
Johann Hauswald, Michael A. Laurenzano, Yunqi Zhang, Hailong Yang, **Yiping Kang**, Cheng Li, Austin Rovinski, Arjun Khurana, Ronald G. Dreslinski,

Trevor Mudge, Vinicius Petrucci, Lingjia Tang and Jason Mars.
In the ACM Transactions on Computer Systems (**TOCS**) 2016

DjiNN and Tonic: DNN as a Service and Its Implications for Future Warehouse Scale Computers

Johann Hauswald, **Yiping Kang**, Michael A. Laurenzano, Quan Chen, Cheng Li, Ronald G. Dreslinski, Trevor Mudge, Jason Mars, and Lingjia Tang.
In Proceedings of the 42th International Symposium on Computer Architecture (**ISCA**), 2015.

Quality-of-Service for a High-Radix Switch

Nilmini Abeyratne, Supreet Jeloka, **Yiping Kang**, David Blaauw, Ronald G. Dreslinski, Reetuparna Das, and Trevor Mudge.
In Proceedings of the 51st Design Automation Conference (**DAC**), 2014.

PATENTS

Systems and methods for automatically categorizing unstructured data and improving a machine learning-based dialogue system

Yiping Kang, Michael A. Laurenzano, Johann Hauswald, Lingjia Tang, Jason Mars
US Patent 10,937,417 (2021)

Systems and methods for intelligently configuring and deploying a control structure of a machine learning-based dialogue system

Parker Hill, Jason Mars, Lingjia Tang, Michael A. Laurenzano, Johann Hauswald, **Yiping Kang**, Yunqi Zhang
US Patent 10,936,936 (2021)

Systems and methods for intelligently configuring and deploying a machine learning-based dialogue system

Jason Mars, Lingjia Tang, Michael A. Laurenzano, Johann Hauswald, Parker Hill, **Yiping Kang**, Yunqi Zhang
US Patent 10,769,384 (2020); US Patent 10,740,371 (2020)

Systems and methods for intelligently curating machine learning training data and improving machine learning model performance

Yiping Kang, Yunqi Zhang, Jonathan K. Kummerfeld, Parker Hill, Johann Hauswald, Michael A. Laurenzano, Lingjia Tang, Jason Mars
US Patent 10,303,978 (2019); US Patent 10,679,100 (2020)

Data processing apparatus with memory rename table for mapping memory addresses to registers

Joseph M. Pusdesris, **Yiping Kang**, Adnrew Pellegrini, Benjamin A. Vander-sloot, Trevor N. Mudge

US Patent 9,471,480 (2016)

EXPERIENCE

MAY 2021 - PRESET	Post-doc Research Fellow <i>University of Michigan, Ann Arbor, MI USA</i>
MAY 2019 - MAY 2021	Head of Product, Platform <i>Clinc, Inc., Ann Arbor, MI USA</i>
NOV. 2018 - MAY 2019	Researcher & Staff Software Engineer <i>Clinc, Inc., Ann Arbor, MI USA</i>
MAY 2017 - AUG. 2018	Software Engineer Intern <i>Clinc, Inc., Ann Arbor, MI USA</i>
SEPT. 2014 - AUG. 2018	Graduate Student Research Assistant <i>University of Michigan, Ann Arbor, MI USA</i> › Clarity Lab. › Computer Engineering Laboratory (CELAB)
MAY 2014 - APR. 2014	Undergraduate Student Research Assistant <i>University of Michigan, Ann Arbor, MI USA</i>

PROFESSIONAL SERVICE

Program Committee	IISWC 2021
Submission Chair	ISCA 2022
Guest Editor	Special Issue of Journal J: "Intelligently Curating Machine Learning"
External Review Committee	ASPLOS 2022
External Reviewer	MICRO 2015,2016,2017 ASPLOS 2016,2017,2018 ISCA 2016,2017,2018,2019 CGO 2017

OPEN-SOURCE

DjiNN and Tonic

Deep neural network as a service and a suite of intelligent applications spanning image, speech and natural language processing.

Sirius

An open source end-to-end standalone speech and vision based intelligent personal assistant (IPA) service.

TECHNICAL SKILLS

Frameworks:	Docker, K8s, Torch, Tensorflow, Django, Flask, Keras, Kaldi
Programming and scripting:	Python, Lua, C/C++, R, Verilog, Java, MPI, openMP
Simulators and profiling tools:	nvprof, gem5, Pin, VTune
Languages:	English, Chinese

AWARDS

Scholarship: University of Michigan EECS Departmental Fellowship, 2014-2015