Yiru Chen

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RESEARCH INTEREST

Data Management, Interactive Data Exploration and Analytics, Data Visualization

EDUCATION

Columbia University	New York, USA
Ph.D. in Computer Science	*2018 - present*
Master of Philosophy	*2018 - 2022*
M.S. in Computer Science	*2018 - 2019*
Supported by **Google PhD Fellowship**	
GPA: 4.02/4	
Advisor: Prof. Eugene Wu	
Peking University	Beijing, China
B.S. in Computer Science, **Summa Cum Laude**	*2014 - 2018*
B.A. in Economics	*2015 - 2018*
Advisor: Prof. Bin Cui	

WORKING EXPERIENCE

Columbia University	Sep 2018 - present
Graduate Research Assistant	*New York, USA*
Microsoft Research	May 2020 - Aug 2020
Research Intern	*Washington, USA*
Peking University	Jan 2016 - July 2018
Undergraduate Research Assistant	*Beijing, China*
Microsoft Research Asia	Oct 2017 - Apr 2018
Research Intern	*Beijing, China*
Carnegie Mellon University	June 2017 - Sep 2017
Research Intern	*Pennsylvania, USA*
Google Summer of Code	Apr 2016 - Aug 2016
Open Source Contributor	*Beijing, China*

SELECTED HONORS AND AWARDS

- EECS Rising Star, 2023
- Google PhD Fellowship 2021
- SIGMOD 2022, 2023 Travel Award
- ICDE 2023 Travel Award
- VLDB Attendance Grant 2021
- CRA-W Travel Award 2021
- 2nd prize in ACM SIGMOD Programming Contest 2017

- China National Scholarship 2015, 2017
- Founder Scholarship 2016
- HuaWei Scholarship 2017
- Outstanding Student of Beijing City, 2018
- Pacemaker to Merit Student, Peking University, 2017
- Outstanding Research Award, Peking University, 2017
- Selected into CS Elite Class (Turing Class), Peking University (2016)
- Outstanding Leader In EECS, Peking University, 2015
- 1st Prize Chinese Mathematical Olympiad in Jiangsu Province (CMOP) 2014, 2013
- Recommended Early Admission into Peking University 2013

PUBLICATIONS

Yiru Chen, Jeffery Tao, Eugene Wu
DIG: The Data Interface Grammar [pdf]
SIGMOD HILDA workshop 2023

Yiru Chen, Silu Huang
TSEXPLAIN: Explaining Aggregated Time Series by Surfacing Evolving Contributors
ICDE 2023

Yiru Chen, Ryan Li, Austin Mac, Tianbao Xie, Tao Yu, Eugene Wu
NL2INTERFACE: Interactive Visualization Interface Generation from Natural Language Queries[pdf]
VIS NLVIZ workshop 2022

Yiru Chen, Eugene Wu
PI2: End-to-end Interactive Visualization Interface Generation from Queries[pdf]
SIGMOD 2022

Jeffery Tao, **Yiru Chen**, Eugene Wu
Demonstration of PI2: Interactive Visualization Interface Generation for SQL Analysis in Notebook [pdf]
SIGMOD Demonstration 2022

Yiru Chen, Silu Huang
TSExplain: Surfacing Evolving Explanations for Time Series[pdf]
SIGMOD Demonstration 2021

Yiru Chen, Eugene Wu
Monte Carlo Tree Search for Generating Interactive Data Analysis Interfaces[pdf]
AAAI IPA workshop 2020

Yingxia Shao, Xupeng Li, **Yiru Chen**, Lele Yu, Bin Cui
Sys-TM: A Fast and General Topic Modeling System[pdf]
TKDE 2019

Thibault Sellam, Kevin Lin, Ian Huang, **Yiru Chen**, Michelle Yang, Carl Vondrick, Eugene Wu
DeepBase: Deep Inspection of Neural Networks[pdf]
Technical Report

Yiru Chen, Yiliang Shi, Boyuan Chen, Thibault Sellam, Carl Vondrick, Eugene Wu
Deep Neural Inspection Using DeepBase[pdf]
NeurIPS Sys for ML workshop 2018

Xiting Wang, **Yiru Chen**, Jie Yang, Le Wu, Zhengtao Wu, Xing Xie
A Reinforcement Learning Framework for Explainable Recommendation [pdf]
ICDM 2018

Xupeng Li, Bin Cui, **Yiru Chen**, Wentao Wu, and Ce Zhang
MLog: Towards Declarative In-Database Machine Learning [pdf]
VLDB Demonstration 2017

Pradeeban Kathiravelu, **Yiru Chen**, Ashish Sharma, Helena Galhardas, Peter Van Roy, Luís Veiga
On-Demand Service-Based Big Data Integration: Optimized for Research Collaboration [pdf]
VLDB Data Management and Analytics for Medicine and Healthcare workshop 2017

Dominic Stark, Barthelemy Launet, Kevin Schawinski, Ce Zhang, Michael Koss, M Dennis Turp, Lia F Sartori, Hantian Zhang, **Yiru Chen**, Anna K Weigel
PSFGAN: a generative adversarial network system for separating quasar point sources and host galaxy light [pdf]
Monthly Notices of the Royal Astronomical Society

TALKS AND PRESENTATIONS

- **DIG: The Data Interface Grammar**
  SIGMOD HILDA workshop 2023

- **NL2INTERFACE: Interactive Visualization Interface Generation from Natural Language Queries**
  VIS NLVIZ workshop 2022

- **PI2: End-to-end Interactive Interface Generation from SQL Queries**
  North East Database Day 2023
  New York Data Science Day 2023
  SIGMOD 2022
  SIDMOD Demonstration 2022
  Jane Street's Symposium 2022

- **TSEXPLAIN: Explaining Aggregated Time Series by Surfacing Evolving Contributors**
  ICDE 2023
  SIGMOD Demonstration 2021
  Microsoft Research 2020

- **Monte Carlo Tree Search for Generating Interactive Data Analysis Interfaces**
  Grad Cohort Workshop for Women 2021
  AAAI IPA workshop 2020
  New York Data Science Day 2020

- **Deep Neural Inspection Using DeepBase**
  New York Data Science Day 2019
  New York Database Workshop 2019

- **MLog: Towards Declarative In-Data**
  VLDB Demonstration 2017

- **SIGMOD Programming Contest Runner Up Poster Presentation 2017**

SERVICE

To the Profession

- Session Chair - VLDB 2022

- Program Committee Member - VLDB Demonstration 2023

- Program Committee Member - BigVis 2023
- Program Committee Member - SDM 2023
- Program Committee Member - DASFAA 2023
- Program Committee Member - VLDB Demonstration 2022
- Program Committee Member - SOSP Artifact Evaluation 2021
- Reviewer - WSDM Demonstration 2023
- Reviewer - TKDE 2022
- Student Volunteer - SIGMOD 2023
- Student Volunteer - ICDE 2023
- Student Volunteer - VIS 2022

To the University
- MS Admissions Committee – Columbia University, 2022
- Graduate Application Mentor - Columbia University, 2020
- CS Department Representative - Engineering Graduate Student Council, Columbia University, 2018

TEACHING ASSISTANT

- COMS W6113 TOPICS IN DATABASE RESEARCH, Spring '23, Columbia University
- COMS W6998 Systems for Human Data Interaction, Spring '20, Columbia University
- COMS W4111 Introduction to Databases, Spring '19, Columbia University
- COMS W4231 Analysis of Algorithms, Fall '19, Columbia University
- ENGI E4900 Summer Masters Research, Summer '20, Columbia University
- COMS W3998 Undergraduate Research, Spring '20, Columbia University

MENTORSHIP

Master Student
- Jeffery Tao 2021.9 - present
  Master Thesis: An Execution Engine for Physical Visualization Design
- Miles Hong 2022.2 - 2023.5
  Master Thesis: Tutorial Structure: an Interface Model to Generate Interactive Tutorials
- Teng Jiang 2023.2 - 2023.5
- Alexander Yao 2022.2 - 2022.5
- Xiaoyue Chen 2022.2 - 2022.9

Undergraduate
- Janissa Abreu 2022.5 - present
- Ryan Li 2022.5 - 2022.9
- Austin Mac 2022.5 - 2022.9
- Brandon Zhang 2020.2 - 2020.5