Brian Hentschel

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Education

(Expected) May 2022	Ph.D., Computer Science Harvard University Advisor: Stratos Idreos Thesis: "Cerebral Data Structures"
2018	M.S., Computer Science Harvard University Advisor: Stratos Idreos
2014	B.A., Mathematics B.A., Computer Science Pomona College

Honors

2019	Harvard Distinction in Teaching
2018	ACM SIGMOD Research Highlight
2017	Best Paper, Conference on Extending Database Technology (EDBT)
2016	Smith Graduate Fellowship
2016	Harvard Distinction in Teaching
2014	Pomona Scholar

Past Employment

Jun 2018 – Aug 2018	Research Intern Microsoft Research, Data Mining, Management, and Exploration
Jun 2016 – Aug 2016	Research Intern IBM Research Almaden, Databases
Aug 2014 – Aug 2015	Software Engineer LinkedIn
May 2013 – Aug 2013	Software Engineering Intern Microsoft
May 2012 – Aug 2012	Software Engineering Intern Amazon

Publications

SIGMOD '22	Brian Hentschel, Utku Sirin, Stratos Idreos. "Entropy-Learned Hashing." In *Proceedings of the 2022 ACM SIGMOD International Conference on the Management of Data.*
VLDB '21	Kyle Deeds*, Brian Hentschel*, Stratos Idreos. "Stacked Filters: Learning to Filter by Structure" In *Proceedings of the 47th International Conference on Very Large Databases.* [* denotes co-first authors]
MLSys '20	Abdul Wasay, Brian Hentschel, Stratos Idreos. "MotherNets: Rapid Deep Ensemble Learning" In *Proceedings of the 3rd Conference on Machine Learning and Systems.*

TODS '19	Brian Hentschel, Peter J. Haas, Yuanyuan Tian. "General Temporally Biased Sampling Schemes for Online Model Management." In *Volume 44 of the ACM Transactions on Database Systems.*
IEEE DEBull. '19	Stratos Idreos, Kostas Zoumpatianos, Subarna Chatterjee, Wilson Qin, Abdul Wasay, Brian Hentschel, Mike Kester, Niv Dayan, Demi Guo, Minseo Kang, Yiyou Sun. "Data Structure Alchemy." In *Volume 42 of the Bulletin of the IEEE Computer Society Technical Committee on Data Engineering.*
SIGMOD Record '19	Brian Hentschel, Peter J. Haas, Yuanyuan Tian. "Online Model Management via Temporally Biased Sampling." In *Volume 48 of the ACM SIGMOD Record.*
SIGMOD '18	Brian Hentschel, Michael Kester, and Stratos Idreos. "Column Sketches: A Scan Accelerator for Rapid and Robust Predicate Evaluation" In *Proceedings of the 2018 ACM SIGMOD International Conference on the Management of Data.*
SIGMOD '18	Stratos Idreos, Kostas Zoumpatianos, Brian Hentschel, Michael Kester, Demi Guo. "The Data Calculator: Data Structure Design and Cost Synthesis from First Principles and Learned Cost Models" In *Proceedings of the 2018 ACM SIGMOD International Conference on the Management of Data.*
EDBT '18	Brian Hentschel, Peter J. Haas, Yuanyuan Tian. "Temporally-Biased Sampling for Online Model Management" In *the 21st International Conference on Extending Database Technology.* [best paper, ACM SIGMOD Research Highlight]
IEEE DEBull. '18	Stratos Idreos, Kostas Zoumpatianos, Manos Athanassoulis, Niv Dayan, Brian Hentschel, Michael Kester, Demi Guo, Lukas Maas, Wilson Qin, Abdul Wasay, Yiyou Sun. "The Periodic Table of Data Structures" In *Volume 41 of the Bulletin of the IEEE Computer Society Technical Committee on Data Engineering.*

Preprints

in prep.	Brian Hentschel, Peter J. Haas, Yuanyuan Tian. "Exact PPS Sampling with Bounded Sample Size"
in prep.	Sanket Purandare, Abdul Wasay, Brian Hentschel, Stratos Idreos. "μ-Two: Faster Multi Model Training"

Professional Activities

SIGMOD '21	Reviewer
VLDB '21	Reviewer
ICDE '16	External Reviewer
SIGMOD '16	External Reviewer

Teaching

Fall 2021	Teaching Fellow CS 165: Data Systems
Spring 2020	Teaching Fellow CS 265: Advanced Data Systems
Fall 2019	Teaching Fellow CS 165: Data Systems
Fall 2018	Teaching Fellow CS 165: Data Systems

Spring 2018	Teaching Fellow CS 265: Advanced Data Systems
Fall 2017	Teaching Fellow CS 165: Data Systems
Fall 2016	Teaching Fellow CS 165: Data Systems
Fall 2013	Course Tutor Math 131: Principles of Real Analysis I
Fall 2012	Computer Science Mentor CS 81: Computability and Logic
Spring 2012	Computer Science Mentor CS 81: Computability and Logic

Advising

Masters	Ivan Sinyagin
College	Kyle Deeds, Joshua Pan, Xuxiang (Aaron) Tian, Haojie Shi
High School	Michael Teshome, Demi Guo

Talks

Dec 2021	Microsoft Research: Data Mining, Management, and Exploration Group and Database Group
Nov 2021	Northeastern University, Data Lab
Oct 2021	SalesForce Infrastructure Engineering Team
Sep 2021	Boston University, MiDAS Group
Apr 2020	Cornell University, Advanced Database Systems
Jan 2020	Centrum Wiskunde and Informatica, Databases Group
Jan 2020	Northeast Database Day
Apr 2019	Boston University, MiDAS Group
Aug 2018	Microsoft Research
May 2018	Vertica
May 2018	Oracle
Apr 2018	NetApp