

Aaron Huber

RESEARCHER DATA SCIENCE MANAGEMENT
SYSTEMS

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EDUCATION

University at Buffalo, 2015 – Present

- Conduct research in PDB/incomplete DBMS: theoretical and systems analysis of deterministic runtime of PDB queries
- Perform research in computing and propagating uncertainty through PDB/AQP systems
- Investigate/analyze the computation of and propagation of statistical information and other metadata through query operators
- Master's Degree 2017

State University of New York at Fredonia, 2013-2015

- Computer Science: Ethical Hacking, Penetration Testing, Databases, Microcontrollers, Networking, Assembly, Discreet Math
- Computer Information Systems: Operation and management of information systems: Excel, Access, DBMS, etc.
- Bachelor of Science Degree 2015
- Suma Cum Laude

EXPERIENCE

Research Assistant, 2017 – Present

- Collaboration on FastPDB, UADB/AUDB, Vizier, Mars Rovers, and other projects

Teacher Assistant, 2015 – 2017

- Develop lesson plans, conduct lectures, grade assignments, one on one instruction with students

SUMMARY

As a student researcher at the University of Buffalo, I have enjoyed intense research into PDB system analysis and development. Inclusive to said research is the development of theoretical bounds over query processing of PDB systems, extensive evaluation of modern PDB/AQP systems, and the development of FastPDB, a DBMS that leverages the wanderjoin algorithm to avoid materializing lineage circuit construction costs and produce fast, reliable approximated output for the end user. One of the key insights in this research was the link between AQP and exact PDB (lineage based) systems.

Other research interests include generating statistical information of interest to specific types of queries, efficiently propagating such results to the end user. A further away, yet related interest in earlier days is security.

SKILLS

- Comfortable with multiple programming/scripting languages
- Adaptability learning new languages, paradigms, and processes
- Ability to search depth first for tasks that require deep drill down
- Persistent, methodical information gathering, conclusion development
- Active learning, thriving on learning from those more advanced than I