

ABHIJEET MOHAPATRA

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EDUCATION

Stanford University, CA, United States

Ph.D Candidate, Computer Science

Indian Institute of Technology, Kharagpur, India

Bachelor of Technology, Computer Science

GPA: 9.53/10.00

2008

RESEARCH AND WORK EXPERIENCE

Stanford University, CA

Graduate Student Researcher, Department of Computer Science

Advisor: Michael Genesereth

- Worksheets. <http://worksheets.stanford.edu>. Developed a platform that enables users to create dynamic, interactive web pages in a DIY fashion.
- Merlin. Developed a system for automatically designing game visualizations from their description. Example at <http://stanford.edu/~abhijeet/trifecta/>.
- Dexter. Developed a browser-based, domain-independent explorer of Web accessible structured. Prototype: <http://dexter.stanford.edu>.
- Thesis research. Developed a novel framework for expressing aggregates in Datalog, and algorithms to efficiently compute, update, integrate and visualize aggregated views over database tables.

Symbium Corp, San Francisco, CA

Developer

Summer 2018

Supervisor: Leila Banijamali

- Formalized San Francisco's complex 2000 page zoning code and developed an interactive web service that streamlines zoning compliance checks for businesses in the city. This work was featured in Mayor Mark Farrell's Press Release.

Microsoft Research, Redmond, WA

Research Intern, Data Management and Exploration Group

Summer 2009, 2010

Mentor: Ravishankar Ramamurthy

- Developed an efficient mechanism to optimize fine-grained access control in database queries with an order of magnitude improvement on TPC-H benchmarks.
- Developed an efficient algorithm to compress database relations with an order of magnitude improvement of existing state-of-art compressors.

Cornell University, NY

Research Intern, Database Group

Summer 2007

Mentor: Johannes Gehrke

- Developed a novel architecture for efficiently executing and scaling massive multi-player games.
- Developed an efficient algorithm that ensures collision-free navigation in crowd simulations.

IBM Research Lab, New Delhi

Research Intern

Summer 2006

Mentor: Ravishankar Ramamurthy

- Developed a formal framework to answer temporal queries on complex event streams in the Lustre framework.

INVENTIONS

- *Client sided logic programming library for creating and configuring HTML pages*. Licensed to Symbium Corp. through the Office of Technology Licensing (OTL), Stanford (Docket: S18-097)
- *Method and System for Database Storage Management* (USPTO Grant: 9720927)
- *Optimizing Fine Grained Access Control using Authorization Indexes* (USPTO App.: 20120330925)
- *Efficient Database Compression* (USPTO App.: 20120150877)

REFEREED PUBLICATIONS

- *Update Policies*, Australasian Joint Conference on AI, 2016
- *Invariant Projections in Games*, Global Conference on AI (GCAI), 2016
- *Smart Forms*, AAAI Fall Symposium, 2016
- *Rule-Based Exploration of Structured Data in the Browser*, RuleML, 2015
- *Raising Authorization Awareness in a DBMS*, Conference on Innovative Database Systems Research (CIDR), 2015
- *Dexter: Plugging-n-Playing with Data Sources in Your Browser*, AAAI Workshop on Semantic Cities, 2014
- *Incremental Maintenance of Aggregate Views*, Foundations of Information and Knowledge Systems (FoIKS), 2014
- *An Incremental Algorithm to Optimally Maintain Aggregate Views*, Logic for Programming, AI and Reasoning (LPAR), 2013
- *Reformulating Aggregate Queries using Views*, Symposium on Abstraction, Reformulation, and Approximation (SARA), 2013
- *Incrementally Maintaining Run-length Encoded Attributes in Column Stores*, International Database Engineering and Applications Symposium (IDEAS), 2012

INVITED TALKS, PANELS AND PRESENTATIONS

- *Streamlining the ADU Process, from Beginning to End*, Planning and Community Directors Meeting, County of San Mateo, CA - 2018
- *Computational Law*, Legal Specification Protocol (LSP) Development Conference, CodeX, Stanford - 2017
- *Rule Systems Panel*. Future Law Conference, Stanford - 2017
- *Automating the Design of Game Visualizations*, General Game Playing Competition, AAAI Conference on Artificial Intelligence - 2015
- *Dexter: A Browser-based Data Explorer for End Users*, Computer Science 2014-15 Seminar Series, University of New Brunswick - 2014

AWARDS AND FELLOWSHIPS

- IIT Kharagpur J.C. Ghosh Memorial Award - 2007
- IIT Kharagpur G.S. Memorial Endowment Scholarship - 2007
- IIT Kharagpur Alumni (California Chapter) Award 2006
- IIT Kharagpur Class of 1970 Alumni (US Association) Prize 2006
- Indian Academy of Sciences Summer Fellowship 2006