

ADAM DZIEDZIC

PERSONAL DETAILS

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DATE OF BIRTH: 2-nd of August 1988
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EDUCATION

CURRENT 2019 PhD Program in COMPUTER SCIENCE
JULY 2015 **The University of Chicago, USA**
ADVISOR: Professor Sanjay KRISHNAN
RESEARCH AREAS: Machine and Deep Learning, Data Analysis and Management, Databases, Systems
I work on declarative interfaces for deep learning and compression of inputs and filters in the frequency domain for the FFT based convolution. We investigate how the Band-Limited Convolutional Neural Networks can be leveraged to create a robust defense against adversarial attacks. In the past, I did research on recommendation of indexes and hybrid physical designs for SQLServer, data loading and migration framework for the BigDAWG project.
Courses: Deep Learning, Databases, Algorithms & Data Structures, Machine Learning, Operating Systems, Distributed Systems, Discrete Mathematics, Computer Architecture, Networks, Mathematical Toolkit (Linear Algebra & Probability), Topics in Databases, Convex Optimization
GPA: 3.91/4
TEACHING ASSISTANT: Introduction to Databases, Databases for Public Policy

JUNE 2015 Research Internship
OCTOBER 2014 **École Polytechnique Fédérale de Lausanne, Switzerland**
GROUP: Data Intensive Applications and Systems
ADVISOR: Professor Anastasia AILAMAKI
I built an automated testing infrastructure to benchmark the loading performance of several commercial and open-source databases, performed in depth analysis to identify bottlenecks of the process and investigated novel techniques which could be used to accelerate DBMS data loading.

SEPTEMBER 2014 Graduate Research Assistant
OCTOBER 2013 **Warsaw University of Technology, Poland**
MAJOR: Computer Information System Engineering
MAIN TOPIC: Big Data
ADVISOR: Professor Jan MULAWKA
TEACHING ASSISTANT: Bioinformatics Algorithms

MARCH 2013 Master of Science in COMPUTER SCIENCE
OCTOBER 2011 **Warsaw University of Technology, Poland**
MAJOR: Computer Information System Engineering
THESIS: "An analysis and comparison of non-relational (NoSQL) databases with an example of application using CouchDB."
TECHNOLOGIES: CouchDB, Riak, HBase, Python, Django, jQuery, sphinx

ADVISOR: Professor Piotr GAWRYSIAK
GPA: 4.93/5 THE FINAL GRADE: Excellent

SEPTEMBER 2011 Bachelor of Science in COMPUTER SCIENCE
FEBRUARY 2011 **Warsaw University of Technology**, Poland
MAJOR: Computer Information System Engineering
THESIS: "Document management system – application in three-tiered architecture."
ADVISOR: Ph.D. Eng Jarosław DAWIDCZYK
TECHNOLOGIES: PostgreSQL, Java, JEE, Hibernate, Dojo, PowerDesigner
ObjectLedge, TestNG, JUnit, OO Design, Apache Tomcat
GPA: 4.80/5 THE FINAL GRADE: Excellent

JANUARY 2011 **Technical University of Denmark**, Copenhagen, Denmark
AUGUST 2010 Erasmus Programme
Courses: Logical Systems and Logic Programming, Advanced Databases, Applied Statistics
and Statistical Software, Web 2.0 and Mobile Interaction, Java Programming
GPA: 11.71/12

JUNE 2010 **Warsaw University of Technology**, Poland
OCTOBER 2007 MAJOR: Computer Information System Engineering
JUNE 2007 **Stefan Żeromski's High School in Kielce**, Poland
SEPTEMBER 2004 Extended curriculum in mathematics and physics

PUBLICATIONS AND POSTERS

- ICML 2019 Adam Dziedzic, Ioannis Paparrizos, Sanjay Krishnan, Aaron J. Elmore,
Michael Franklin *Band-limited Training and Inference for
Convolutional Neural Networks* (paper)
- CIDR 2019 Sanjay Krishnan, Adam Dziedzic, Aaron J. Elmore
DeepLens: Towards a Visual Data Management System (paper)
- SIGMOD 2018 Adam Dziedzic, Jingjing Wang, Sudipto Das,
Bolin Ding, Vivek R. Narasayya, Manoj Syamala
Columnstore and B+ tree – Are Hybrid Physical Designs Important? (paper)
- UChicago 2017 Adam Dziedzic *Data Loading, Transformation and Migration
for Database Management Systems* (Master's thesis)
- CIDR 2017 Tim Mattson, Vijay Gadepally, Zuohao She, Adam Dziedzic
and Jeff Parkhurst *Demonstrating the BigDAWG Polystore System
for Ocean Metagenomic Analysis* (paper)
- ADMS 2016 Adam Dziedzic, Manos Karpathiotakis, Ioannis Alagiannis,
Raja Appuswamy and Anastasia Ailamaki
DBMS Data Loading: An Analysis on Modern Hardware (paper)
- HPEC 2016 Adam Dziedzic, Aaron J. Elmore and Michael Stonebraker
Data Transformation and Migration in Polystores (paper).
- HPEC 2016 John Meehan, Stan Zdonik, Shaobo Tian, Yulong Tian,
Nesime Tatbul, Adam Dziedzic and Aaron J. Elmore

Integrating Real-Time and Batch Processing in a Polystore (paper)

GCASR 2016 Adam Dziedzic and Aaron J. Elmore *Portage: A Data Migrator for a Polystore in the Database Deluge Era* (poster)

NEDBDAY 2016 Adam Dziedzic and Aaron J. Elmore *Portage: A Data Migrator for a Polystore in the Database Deluge Era* (poster)

IEEE VIS DSIA 2015 Adam Dziedzic, Jennie Duggan, Aaron J. Elmore, Vijay Gadepally and Michael Stonebraker. *BigDAWG: a Polystore for Diverse Interactive Applications* (paper)

SPIE 2014 Adam Dziedzic and Jan Mulawka. *Analysis and Comparison of NoSQL databases with an introduction to consistent references in big data storage systems* (paper)

AWARDS

2019 ICML Travel Award.
2018 SIGMOD Travel Award.
2011-2012 The scholarship of the Rector of the Warsaw University of Technology for my achievements during Master's program.
2007-2011 The academic scholarship for the best faculty students (granted on a yearly basis and based on GPA).

WORK EXPERIENCE

SEPTEMBER 2017	GOOGLE (MADISON, THE US)
JUNE 2017	<i>PhD Software Engineering Intern at Data Infrastructure and Analysis team</i> Mentor: Goetz Graefe Eliminated a performance cliff in the F1 database for the aggregation queries. Researched and designed different methods of incremental spilling and skew-awareness for graceful aggregation. Contributed to the low-level data structures and made changes that were crucial to achieve robust performance in F1. Coded in C++, wrote tests and performed code reviews. Participated and presented a poster during the internal Google PIRC 2017 conference for PhD interns.
JUNE 2017	MICROSOFT RESEARCH (REDMOND, THE US)
MARCH 2017	<i>Intern at Data Management, Exploration and Mining (DMX) group</i> Mentors: Vivek Narasayya and Sudipto Das. Worked on analysis and acceleration of query execution for mixed (OLTP and OLAP) workload. Carried out research on hybrid physical structures for diverse workloads.
AUGUST 2013	BARCLAYS INVESTMENT BANK (LONDON, THE UK)
JUNE 2013	<i>Intern Analyst at Equities Derivatives Technology</i>

	Technologies: Java, Spring, Maven, Velocity, Jetty, JIRA, JUnit, JMock The goal of the project was to validate current underlyings and suggest new underlyings for a given product, for example, a reverse convertible instrument. I created a system that went into production and brought value to business.
DECEMBER 2012	CERN (GENEVA, SWITZERLAND)
APRIL 2012	<i>Technical Student at IT Department and CERN Computer Center</i> I worked on NoSQL and NewSQL databases.
MARCH 2012	MOBILE STARTUP (app providing aspects of music social interactions) Technologies: Python, Django, PostgreSQL, JavaScript, jQuery, Android My own little mobile start-up which provided aspects of music social network interaction. My team took part in Startup Sauna program.
JULY 2010	TEKTEN SP. Z O.O. (WARSAW, POLAND) <i>Dababase designer, Java and PL/SQL software developer</i> Internal system project Technologies: Java, PL/SQL Database: Oracle 10g
SEPTEMBER 2009	TORN SP. Z O.O. (WARSAW, POLAND)
JULY 2009	<i>Java and JavaScript software developer</i> Financial and accounting system project Technologies: HTML, CSS, JavaScript, Java Database: Oracle 10g

TECHNICAL SKILLS

PROGRAMMING LANGUAGES	C++, Java, Python (advanced), C, Bash, JavaScript, PowerShell PL/SQL (intermediate), C#, Prolog, R, Octave, Haskell, Scala (basic)
FRAMEWORKS	PyTorch, TensorFlow, Django, Spring
DATABASES	PostgreSQL 8.4-9.6 (advanced), NoSQL databases (CouchDB, Riak), MonetDB, Oracle 10g/11g/12c, SQL Server, Vertica (intermediate), VoltDB, S-Store, MariaDB (basic)

LANGUAGES

POLISH	Mother tongue
ENGLISH	Fluent
FRENCH	Basic Knowledge

INTERESTS AND ACTIVITIES

 GUITAR I finished a 5-year music school in classical guitar class (2004).

 GEOGRAPHY Travelling is my passion. I won the geographic contest,
AND TRAVELLING the main topic of which were Asian countries (2004).

 SPORTS I am an amateur basketball player. I was a member
 of my high school basketball team.
 Currently, I attend dance & Aikido lessons at the University
 of Chicago.