Konstantinos Xirogiannopoulos

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INTERESTS

I am interested in database systems, big data management, large-scale data analytics and distributed systems

EDUCATION

PhD. in Computer Science, **August 2014 - currently**
MSc. in Computer Science (acquired Dec. 2016)
University of Maryland, College Park
Advisor: Prof. Amol Deshpande

BSc. in Computer Science, **Sept. 2009 - Jan. 2014**
Athens University of Economics and Business
Ranked in the top 7.5% in past five years of graduates

HONORS & AWARDS

- Dean's Fellowship
  University of Maryland, College Park
- Honorary Scholarship and Award for Academic and Moral distinction on first year (2009-10) *State Scholarships Foundation*
  (Ranked #1 / 240)

RESEARCH EXPERIENCE

Graduate Research Assistant **June 2015 - currently**
University of Maryland, College Park Databases Lab
Advisor: Prof. Amol Deshpande
Full-time Graduate Research Assistant, lead developer for the `GraphGen` Project.

Research Focus: Large-Scale Graph Extraction from Relational Datasets
`GraphGen`: Efficiently and intuitively extracting graphs from relational data using a custom Domain Specific Language based on Datalog. This allows users to conduct in-memory large-scale graph analytics on their relational datasets without the need for migrating to a native graph database *[project webpage]*

Undergraduate Researcher **Oct. 2012 - Sept. 2013**
Athens University of Economics and Business
Thesis Title: "Graph Databases and Big Data : Study, Overview of Existing Systems, and Sub-Graph Matching Queries Algorithm Implementation using Apache Hama Graph-Parallel Processing Framework"
Supervisor: Prof. Yannis Kotidis

PUBLICATIONS

Reseach Papers
Konstantinos Xirogiannopoulos, Amol Deshpande
Extracting and Analyzing Hidden Graphs from Relational Databases
SIGMOD 2017

Demonstrations
Konstantinos Xirogiannopoulos, Udayan Khurana, Amol Deshpande
GraphGen: Exploring Interesting Graphs in Relational Data
VLDB 2015

Workshops
Konstantinos Xirogiannopoulos, Virinchi Srinivas, Amol Deshpande
GraphGen: Adaptive Graph Processing using Relational Databases
GRADES 2017

PROFESSIONAL EXPERIENCE

Summer Research Intern **May 2016 - August 2016**
IBM Almaden Research Center, California USA
Manager: Fatma Ozcan, *Mentor*: Abdul Quamar
Summer Research Intern working on a project in regarding data management and retrieval over the knowledge graph. This work is covered by a non disclosure agreement.
Technical Skills: Java, Spark MLlib, VOwl, Protege

TEACHING & MENTORING

Graduate Teaching Assistant **Sept. 2014 - Dec. 2014**
Course: CMSC132: Object Oriented Programming II
Instructor: Larry Herman
Conducted four 1-hour long discussion sections per week (approx. 35 students per section) and held 4-hours of office-hours every week for answering questions. These discussion sections included explaining concepts, doing worksheets, assigning and grading quizzes. Graded quizzes and actively participated in grading of midterms and final exams.

RECENT COURSES

CMSC818: Distributed and Cloud Based File Systems **Sept. 2014 - Dec. 2014**
Instructor: Prof. Peter Keleher
Built Distributed Fault Tolerant, Durable File System from Scratch: Starting from a simple in-memory file system implementation, made it persistent, and later applied and implemented distributed file systems concepts like versioning, replication and distributed consensus (Raft) and developed a fully functional, distributed file system with many guarantees. All development done in *Go* ("A").

CMSC723: Computational Linguistics I **Sept. 2014 - Dec. 2014**
Instructor: Prof. Hal Daume III
Konstantinos Xirogiannopoulos, Kasia Hitczenko
Automatic Quiz-bowl Question Answering: Built a classifier that classified text quiz-bowl questions to their correct answers in an automatic way. Text processing done in *Python* ("A+").

CMSC 724: Database Management Systems **Feb. 2015 - May. 2015**
Instructor: Prof. Amol Deshpande
Konstantinos Xirogiannopoulos, Benjamin Bengfort
Graph-Based Machine Learning on Relational Data ("A+").

CMSC 828M: Applied Mechanism Design for Social Good **Aug. 2016 - Dec. 2016**
Instructor: Prof. John Dickerson
Wrote a discrete event simulation for kidney exchange in pools of *living donor pairs* towards proposing certain policies for kidney exchange. Development being done in *Java* ("A").

TALKS

PyData DC 2016 **Oct. 9 2016**
GraphGen: Conducting Graph Analytics over Relational Databases *[video]*

HOBBIES & INTERESTS *Music* (Electric & Acoustic Guitar), *Sports* (Basketball [participation in town tournaments] , Swimming, Skiing), *Leisure* (Fishing, Cinema, Android OS Enthusiast, Rubiks Speedcubing [national contest participation])