

Arif ARMAN

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OBJECTIVE

Computer Science and Engineering PhD student with research background in Information Retrieval and Spatial Databases, motivated to build research skills by working in leading labs and finally pursue a strong research career.

EDUCATION

AUGUST 2018 - PRESENT	Doctor of Philosophy in COMPUTER SCIENCE Department of Computer Science and Engineering Texas A&M University, College Station, TX	
FEBRUARY 2011 - MARCH 2016	Bachelor of Science in COMPUTER SCIENCE AND ENGINEERING Bangladesh University of Engineering and Technology (BUET), Dhaka Ranked 10 th in a graduating class of 142 students Final Four Semesters Average CGPA: 3.97	CGPA: 3.88/4.00

RESEARCH INTERESTS

Information Retrieval, High Performance Computing, Optimization, Data Mining, Spatial Databases

EXPERIENCE

AUG 2018 -	Graduate Research Assistant in Internet Research Lab (IRL) with Professor Dmitri Loguinov I am working on a high-performance sort that focuses on reducing bottlenecks caused by several CPU components and inefficient code generation by the compiler. I am also working on a streaming framework that provides the programmer with a seemingly infinite buffer.
MAR 2015 - JUL 2018	Research Assistant for Visibility Query Processing in 3D Spatial Databases with Professor Mohammed Eunus Ali. Started working as undergraduate thesis focus and continued to extend after graduation. Multiple papers have been published in top conference proceedings. Developed a variant of R*-Tree to improve performance of novel visibility queries, in collaboration with RMIT University, Australia.
JAN 2017 - JUL 2018	Research Assistant for Active Learning in Big Data with Professor Dewan Md. Farid. Developing a system to reduce dependency on expert opinion for active learning in big data.
MAY 2016 - JUL 2018	Lecturer of Computer Science and Engineering at UNITED INTERNATIONAL UNIVERSITY, Dhaka, Bangladesh. Courses: Algorithms, Object Oriented Programming, Discrete Mathematics, Structured Programming Language etc.

HONORS AND AWARDS

2017	CIKM/SIGIR TRAVEL GRANT to attend and present paper in CIKM 2017 at Pan Pacific, Singapore
2016	BEST POSTER AWARD for Continuous Maximum Visibility Query for a Moving Target in Poster Session of Australasian Database Conference, Sydney, Australia, 2016
2012 - 16	DEAN'S LIST AWARD and SEVERAL MERIT SCHOLARSHIPS for Outstanding Undergraduate Results, BUET
2014	BEST INFORMATION SYSTEM DESIGN for Automation of City Development Authority (RAJUK), BUET
2014	ONE OF TOP TEN DATABASE PROJECTS for Chain Shop Management System, BUET
2009	FULL FREE MERIT SCHOLARSHIP for Higher Secondary Results, Dhaka City College

PUBLICATIONS

- MAR. 2020 | Carson Hanel, **Arif Arman**, Di Xiao, John Keech, and Dmitri Loguinov. "Vortex: Extreme-Performance Memory Abstractions for Data-Intensive Streaming Applications," ACM ASPLOS 2020.
- MAY 2018 | Tamjid Al Rahat, **Arif Arman**, Mohammed Eunus Ali. "Maximizing Reverse k-Nearest Neighbors for Trajectories". In: Databases Theory and Applications. **ADC '18**. Lecture Notes in Computer Science, vol 10837 Pages: 262-274. Springer. [\[DOI\]](#)
- NOV. 2017 | **Arif Arman**, Mohammed Eunus Ali, Farhana Murtaza Choudhury, and Kaysar Abdullah. 2017. "VizQ: A System for Scalable Processing of Visibility Queries in 3D Spatial Databases". In Proceedings of the 2017 ACM on Conference on Information and Knowledge Management (**CIKM '17**). [\[DOI\]](#)
- OCT. 2016 | **Arif Arman**, Kaysar Abdullah, Ishat E Rabban, and Mohammed Eunus Ali. 2016. "IndVizCMap: Visibility Color Map in an Indoor 3D Space". In Proceedings of the Eighth **ACM SIGSPATIAL** International Workshop on Indoor Spatial Awareness (**ISA** 2016). [\[DOI\]](#)
- SEPT. 2016 | Ch. Md. Rakin Haider, **Arif Arman**, Mohammed Eunus Ali, and Farhana Murtaza Choudhury. 2016. "Continuous Maximum Visibility Query for a Moving Target". In Proceedings of the 27th Australasian Database Conference, (**ADC**) 2016, Sydney, NSW, 82-94. [\[DOI\]](#)

NOTABLE PROJECTS

- **SOCIAL MEDIA ANALYTICS**, predicting food habit of Singapore with crawled data from Twitter and Instagram feeds and showing results in a web interface. Created with Java, JSP, MongoDB and Morris-JS.
- **AUTOMATION OF CITY DEVELOPMENT AUTHORITY (RAJUK)**, an information system designed to fully automate work flow of RAJUK. Designed with Sparx Enterprise Architect, Pencil Project.
- **CHAIN SHOP MANAGEMENT SYSTEM**, a management system of a chain shop with multiple branches including POS feature and a consumer side website to support online shopping. Implemented with Visual C# Windows Form Application, Oracle PL/SQL, PHP CodeIgniter, Bootstrap.
- **CITY WATER SUPPLY CONTROL MANAGEMENT**, an agent based simulation engine created to simulate water usage and supply control; implemented with Java MASON.

ADDITIONAL INFORMATION

- **Language and Platform Proficiency:**
 - C++, Python, Java, JavaScript, PHP, OpenGL, Oracle PL/SQL, MySQL, MASON, django, BeautifulSoup, Pandas, Network Simulator, MongoDB, Scikit-Learn, Sparx Enterprise Architect
- **Leadership and Participation:**
 - **ORGANIZER AND MENTOR** of UX DESIGN CONTEST, PROJECT SHOWCASING and PROBLEM SETTER at UIU CSE Festival, 2017
 - ORGANIZER**, International Conference on Medical Engineering, Health Informatics and Technology, 2016
 - CO-FOUNDER AND FORMER GENERAL SECRETARY**, SCIENCE CLUB OF THE LABORATORIANS
 - PARTICIPANT**. MICROSOFT IMAGINE CUP 2013, TOP 12 with project Solvencia; a communication platform for supershop and farmers using IVR (Interactive Voice Response)
 - PARTICIPANT**. EATL-PROTHOM ALO APP DEVELOPMENT CONTEST 2014 for project Ekattor; a first person shooting game based on histories of 1971.
- **Online Courses:** Machine Learning (Coursera), Big Data Fundamentals (edX), Data Science (DataCamp) etc.

REFERENCES

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