Md Lutfar Rahman

622 Brister Street
Apt 18
Memphis, TN-38111

Phone: 901 273 4019
mrahman9@memphis.edu
https://umdrive.memphis.edu/mrahman9/public/

EDUCATION

The University of Memphis,
Memphis, TN, USA
PhD Student, Computer Science
GPA: 4.00/4.00

Fall'16 - Present

Bangladesh University of Engineering and Technology,
Dhaka, Bangladesh
Bachelor of Science, Computer Science and Engineering

February, 2013

USA VISA

F1 Student

RESEARCH

Currently I'm working with Prof. Thomas Watson. My research interest involves computational complexity analysis. My focus is on NP-completeness and PSPACE-completeness of two player perfect game. I'm also interested in competitive programming.

Previously, I also worked in The GTCS Lab under Dr. Shiva. The area was Cloud Computing, Network Security and Game Theory. I used Openstack and Python for my experimentation.

During my undergraduate studies, I worked under Dr. Saidur Rahman in the Graph Visualization Lab at BUET. I studied and analyzed the current state of the road and transportation system of Dhaka city. I analyzed and simulated Dijkstras Algorithm on Dhaka City. Then, I also simulated the alternating shortest path. I came up with different strategies of applying Dijkstra's Algorithm on a large set of data efficiently and compared the performance issues. I used Openstreetmap for the map database.

EXPERIENCE

Graduate Assistant
August, 2016 - Present
The University of Memphis
Memphis, TN, USA
I work under Prof. Thomas Watson as a Research Assistant. Previously, I was also a Teaching Assistant for The Computer Science Department. I helped students for the courses Computer Architecture and Professional Development.

Senior Software Engineer
May, 2014 - July, 2016
ZS Solutions Ltd.
Banani, Dhaka, Bangladesh
I worked on multiple platform. The first one was a scalable web applications based on asynchronous python server (Tornado), task-scheduling using Celery, SQLAlchemy the ORM, RESTful and SOAP based web services and so on. The second one was a small Python-Django based webapp to serve emails as sms.There were inter-dependency between them. I lead the team to develop and maintain the both application.

Member, Research and Development
February, 2013 - April, 2014
Commlink Info Tech Ltd.
Gulshan, Dhaka, Bangladesh
Commlink Info Tech Ltd. is a research oriented company.Their work domain mainly focused on networking & telecommunication solution. Here I worked on (Simple Net-

work Management Protocol)SNMP , java-snmp library, python-snmp library, java 2D graphics and SIP Call monitoring software in Python.I also worked in python-django for doradory.com

PROJECTS

Rent-a-Bike: My Software Engineering project in Spring'17. It was awarded as the first runner-up.
- Ruby on Rails
- PostgreSQL
- Heroku

SmartMessage: A highly scalable web messaging application addressing C10K issue.
- Python/Tornado web server
- Celery/RabbitMQ
- SQLAlchemy ORM + MySQL
- Advanced Message Queuing Protocol (AMQP)
- SOAP

Email2SMS: Web application to serve emails as SMS.
- Python/Django + MySQL
- Crontab
- MailServer

SmartMed: Doctor's patient management solution.
- Python/Django + MySQL
- RESTful APIs(DRF)
- Celery/RabbitMQ
- VanillaJS
- BootStrap, Jquery

RoadSafety: An initiative by Brac and BDCyclists to have safer road. This app allows users to watch/mark safety concerns in the map
- Google Map
- Python/Django + MySQL
- RESTful APIs(DRF)
- VanilaJS
- Bootstrap

Online Shop doradory.com: first auction based online shop in Bangladesh.
- Python/Django + MySQL
- Celery/RabbitMQ

Call Center Solution: a SIP call center solution with Application server and Asterisk server. A Call monitor program can create/edit/delete an agent, display CDR records with different charts as well as can play recorded voice file. It can configure voice mail, follow me, call scheduling, robot calling, inward and outward conferences etc. It can make audio/video call, conference call, schedule call for later, Instant messaging, video conference etc.
- Asterisk SIP
- Python/Django + MySQL

Network Management Software(NMS): NMS for Banglaphone Network.
- Simple Network Management Protocol(SNMP)

- Management Information Base(MIB)
- Java SNMP
- Hibernate + MySQL

BibleShake: Bible Shake generates random scriptures and provides a unique way to navigate the Bible. Shake your device to display a random verse or chapter, or use the spinner wheels to quickly jump to specific verses.Bible shake currently offers full KJV and ASV Bible versions and provides a range of filter options so you can decide where the random verse will be selected from.
- Java/Android
- SQLite

Surveillance System for Dhaka City:
- Openstreet MAP
- Algorithmic code with VanilaJS
- Bootstrap

TECNICAL SKILL

Programming Language:C, C++, C#, Python, Java, Matlab, JavaScript, OpenGL, PHP, 8086 assembly language, prolog, yacc, flex
Frameworks and Libraries: Tornado, Django, SQLAlchemy, CodeIgniter, Hibernate, Node.js, Bootstrap, JQuery
Operating Systems: Several Linux distributions, Windows, OS X
DBMS: MySQL, Oracle SQL, PostgreSQL, SQLite
Others: Git, SVN, Packet Tracer, LATEX, jmeter, unit testing

REFERENCE

Dr. Thomas Watson
Assistant Professor
Computer Science Department
315 Dunn Hall
The University of Memphis
Thomas.Watson@memphis.edu

SAJJAN G. SHIVA Ph.D., Fellow of IEEE
Professor
Computer Science Department
335 Dunn Hall
The University of Memphis
sshiva@memphis.edu

Dr. Md. Saidur Rahman
Professor
Department of Computer Science and Engineering
Bangladesh University of Engineering and Technology
Dhaka 1000, Bangladesh
saidurrahman@cse.buet.ac.bd