

Fahim Tahmid Chowdhury

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OBJECTIVE	To satisfy the thirst for innovation and add values to the society while building up career in research assisted by engineering acumen	
EDUCATION	Florida State University , Tallahassee, Florida PhD, Computer Science , Currently studying, <i>CGPA 4.00/4.00</i> Bangladesh University of Engineering and Technology , Dhaka, Bangladesh Bachelor of Science, Computer Science and Engineering , February 2013, <i>CGPA 3.54/4.00</i> Notre Dame College , Dhaka, Bangladesh Higher Secondary Certificate(HSC), Science, 2007, <i>GPA 5.00/5.00</i> Ispahani Public School and College , Chittagong, Bangladesh Secondary School Certificate(SSC), Science, 2005, <i>GPA 5.00/5.00</i>	
RESEARCH INTERESTS	<ul style="list-style-type: none">• HPC Systems: Parallel File Systems, I/O Optimization, Heterogeneous Storage, Burst Buffer File Systems, Performance Analysis• Artificial Intelligence: Deep Learning at Scale, Reinforcement Learning	
RESEARCH EXPERIENCE	Department of Computer Science, Florida State University , Tallahassee, Florida <i>Graduate Research Assistant</i> August, 2017 - Present Working in Computer Architecture and SysTems Research Lab (CASTL) under the supervision of <i>Professor Dr. Weikuan Yu</i> National Energy Research Scientific Computing Center (NERSC) , Lawrence Berkeley National Laboratory (LBNL), Berkeley, California <i>Student Assistant</i> May, 2018 - August, 2018 Worked as a summer intern in the Data Analytics and Services group at NERSC on a project for analyzing scalable data pipeline for distributed deep learning NERSC, LBNL , Berkeley, California <i>LBNL Affiliate</i> August, 2018 - Present Continuing the summer internship project on distributed deep learning applications' data pipeline	
TECHNICAL SKILLS	<ul style="list-style-type: none">- Programming Languages: C/C++, Python, C#, Matlab, Java, Javascript- API Libraries: HDF5, BSD sockets, WinSock, Opengl, Boost, Windows API, Google Test- Frameworks: TensorFlow, Horovod, Qt Framework, MFC, .NET Framework- Distributed File Systems: BurstFS, UnifyCR, BeeGFS, Lustre, Octopus- I/O Benchmark Tools: IOR, MDTest, DD, IOZone, Bonnie++- Profiling Tools: Darshan, TensorFlow Timeline- Database Management Systems: MySQL, Oracle, SQL Server- Design Tools: EDraw, GraphViz, Rational Rose- Documentation Tools: L^AT_EX, Doxygen- Project Management Applications: Jira, Redmine, Mantis, Microsoft Project- Version Control Systems: Git, Mercurial, SVN- Operating Systems: Unix/Linux, Windows	
RESEARCH PROJECTS	<ul style="list-style-type: none">• Scalable Data Pipeline for Distributed Deep Learning: Working on a project with NERSC for profiling I/O in the distributed deep learning applications to explore the I/O bottlenecks, and design and implement an optimization strategy to overcome the possible bottlenecks• BeeGFS Performance Evaluation: Serving a collaboration project with LLNL for evaluating the performance of BeeGFS parallel cluster file system using different I/O and metadata performance benchmarks, and Deep Learning applications	

- **Burst Buffer File System:** Working on a project for enhancing a burst-buffer file system (i.e. [UnifyCR](#)) by making it flash-friendly and persistent
- **Study on LBANN:** Studying [Livermore Big Artificial Neural Network \(LBANN\)](#)
- **Specialized File System for Large Datasets of Deep Neural Network:** Assisting a collaboration project with [LLNL](#) for designing a file system for large datasets of Deep Neural Network by studying the data shuffling mechanism in TensorFlow and Caffe

INDUSTRY
EXPERIENCE

[IPvision Canada Inc.](#), Dhaka, Bangladesh

Software Analyst

October, 2016 - July, 2017

Worked as a member of the development team for developing the SDK of the social networking platform named [ringID](#)

[Vizrt](#), Dhaka, Bangladesh

Software Engineer

July, 2014 - September, 2016

Served as a member of the [Sports Solutions](#) R&D team in Dhaka, mostly worked on [Viz Libero](#) software

[Enosis Solutions](#), Dhaka, Bangladesh

Software Engineer

February, 2013 - June, 2014

Worked as a member of the development team for [Visual-Host](#) which is an offshore SDK framework of a Computer Aided Engineering(CAE) software [Visual-Environment](#)

UNDERGRADUATE
THESIS

[Design of a Surveillance System for Dhaka City](#), *Graph Drawing and Information Visualization Lab*, CSE, BUET under the supervision of [Dr. Md. Saidur Rahman](#)

- Designed and simulated an integrated system to monitor and control the traffic system of Dhaka
- Applied different shortest path algorithms on Dhaka city map
- Proposed locations for police-boxes on the prominent road-crossings of Dhaka using 2-Approximation Vertex Cover Algorithm
- Proposed heuristic algorithm that can be applied on clustered map of a large area

ACADEMIC
PROJECTS

- **CSE Office Management:** An integrated system for automating all the official tasks (i.e. Inventory management, Notice board, Teachers' profile, Peer-to-peer communication etc.) of BUET CSE
- **Network Text Editor:** A C++ application to facilitating collaborative editing in a LAN
- **micro-C Compiler:** A simple compiler implementation for C-like programming language (i.e. micro-C)
- **Automated Water Faucet:** A portable hardware device that can be put on any water tape to control the flow of water automatically by detecting human presence using PIR sensor for avoiding wastage
- **Digital Watch with Timer:** A digital watch with timer developed using ATMEGA 8 Microcontroller
- **LAN Messenger:** A software developed in Java for chatting with the contacts that are in a LAN
- **NACHOS:** Not Another Completely Heuristic Operating System implementation developed in C++
- **Snooker Game:** A two player Snooker game developed in C++
- **Screensaver:** A simple screensaver developed in Assembly Language

VOLUNTARY
PROJECTS

- **Gaming Application for Differently Abled Children:** A car racing game interfaced with cycling machine for encouraging the [Active Range Of Motion Exercise \(AROME\)](#) for the children having weakness in [Quadriceps femoris muscle](#) being conducted in [Feroza Bari Disabled Children Hospital](#)
- **Software for ReCAP:** A software for prioritizing the roads and highways by simulating an algorithm that is developed by [Department of Urban and Regional Planning](#), BUET

COMMUNITY
WORK

[Engineering Students' Association of Bangladesh](#)

A common platform for all the engineering students of Bangladesh

President

October, 2011 - November, 2013

[Pioneered](#) the voluntary association along with a bunch of energetic people and served as the organizational head

ACADEMIC
ACHIEVEMENTS

- Champion in the Intra-Department Project Competition for the project *CSE Office Management*
- Board Merit Scholarship, HSC Examination
- Board Merit Scholarship, SSC Examination