

## Simsarul Haq Vengasseri

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### EDUCATION

**Bachelor of Technology** (B.Tech) in *Computer Science and Engineering* (2013-2017)

National Institute of Technology, Calicut

Selected courses taken include: Computational Complexity  
Quantum Computation  
Topics in Algorithms (Mainly on Parameterized Algorithms)  
Logic for Computer Science

Summer programs participated:	Program	Institute	Year
	Summer School	Indian Institute of Science, Bangalore	July 2016
	Internship	International Center for FOSS	July 2015

### PROJECTS

- **Circuits and Succinct Representations** (Bachelor Thesis Project, NIT Calicut)  
(Guide: Dr. Murali Krishnan K, Associate Professor, NIT Calicut)
  - Studied small depth circuits and obtained the relationships between them.
  - Studied the time complexity of succinctly represented family of graphs and formalized the succinct boolean satisfiability problem.
  - Conducted a survey on the non-uniform  $ACC^0$  circuit lower bound.
- **Internet of Things based Plant Monitoring** (Internship Project at ICFOSS)  
(Guide: Akshai M, Founder, MicroHOPE Foundation)
  - Prototype : Acquire data from plant surroundings using various sensors, and the information is blogged onto a blogging website made using Django framework in Python.
  - This Project was based on FOSS and open hardware based tools.
- **Test Driven Development based approach to a Broadcast Application**  
(Guide: Noufal Ibrahim, Founder of Lycaenum and PyCon India)
  - Prototype : A broadcasting application based on TDD, that broadcasts messages across social medias.
  - Project is version controlled using git.
- **XOS (eXperimental Operating System)** (Operating Systems Lab Project)  
(Guide: Dr. Murali Krishnan K, Associate Professor, NIT Calicut)
  - Objective : To develop an experimental operating System and to implement OS data structures and functionalities on a simulated machine called experimental string machine.
  - Prototype : A simple operating system consisting of file system calls including create, close, delete, write, seek, read and process system calls including fork, exec, and exit. Exception handling and demand paging were also implemented.

### SEMINAR

- **Barriers in Computational Complexity**  
(Seminar Coordinator: T A Sumesh, Assistant Professor, NIT Calicut)
  - Conducted a study on Relativization, Algebrization and Natural Proofs Barriers and Presented it.
  - Conducted a survey on the circuit lower bounds that circumvent the barriers.

## TECHNICAL SKILLS

Languages	Database	Script	Web Development	Version Control
C, C++, Python	MySQL, SQLite	Python, Bash	HTML, CSS, Django	Git

## ROLES AND RESPONSIBILITIES

- **Student System Lab Admin** (Software Systems Laboratory)  
(*Lab In-charge: T A Sumesh, Assistant Professor, NIT Calicut*)
  - Administrates Athena data server, LDAP Authentication server, Media server, Mirror server and various Terminal systems.
  - Manage various events and activities within the lab.
- **Executive Member** (Computer Science and Engineering Association)  
(*Faculty In-charge: Dr. S D Madhu Kumar, Associate Professor, NIT Calicut*)
  - Event Coordinator for Firefox OS Hackathon in collaboration with Mozilla kerala and Tathva'15.
  - Speaker at Linux Workshop and Git Workshop.
  - Volunteer in Computer Science and Engineering Department activities.
- **Convener** (FOSSMeet '17)  
(*Faculty In-charge: Dr. Vinod Pathari, Associate Professor, NIT Calicut*)
  - A student run FOSS conference in kerala, India.
  - 11 Talks, 4 Workshops and 1 Hackathon.
  - 300+ Registrations.

## DECLARATION

- I hereby declare that the above written particulars are true to the best of my knowledge and belief.  
Date : 07-10-2017