

**EDUCATION**

Program	Institution	%/CGPA	Year of Completion
Dual Degree in Computer Science and Engineering	Indian Institute of Technology Madras, Chennai	8.76/10.00	2015
Exchange Semester in the Dept. of Informatics	Technische Universität München, Munich, Germany	21 Credits Earned	2015
Minor in Development Studies	Indian Institute of Technology Madras, Chennai	10.0/10.0	2014
XII (CBSE)	Bharatiya Vidya Bhavan's Vidya Mandir, Thrissur	95.4/100.0	2011
X (CBSE)	Crescent English Medium School, Ajanur	94.6/100.0	2009

SCHOLASTIC ACHIEVEMENTS

- Awarded the prestigious **DAAD scholarship** 'A New Passage to India' by the **German** government
- Received **0.1% merit certificate** in **Mathematics** and **Computer Science** from CBSE (AISSCE 2011)
- Topped school in 12th grade and 10th grade

PROFESSIONAL EXPERIENCE

- Microsoft India Development Centre, Summer Internship Programme, Hyderabad (May-July, 2014)**
 - Worked in the multi-tiered **Information & Content** Experience team, with focus on **Content Intelligence**
 - Conceived, designed and built a backend tool which handles **large scale social data**, around **500+ GB/day**, in real time to be used by Microsoft program managers across the globe enabling **real time data curation**
 - Developed **social data modules** for a confidential project; to positively impact the **7,000,000+ user base**
- NAICO ITS, iOS Development, Summer Internship Program, Kochi (June-July, 2013)**
 - Developed a **native iOS** medical database application deployed in **20+** private clinics and hospitals in the US
 - Native frontend development using **objective C** and **cocoa touch** on a robust .NET framework based backend
- Co-founder, Lumos Creative Media Solutions (a non-profit initiative) (2013-present)**
 - Aims at taking the **art of photography** to the masses by conducting free workshops and photowalks
 - Workshops and photowalks are conducted across the country and are attended by **hundreds** of people

SKILLS

Languages (Main)	<ul style="list-style-type: none"> C/C++ nVidia Cuda 	<ul style="list-style-type: none"> Java/Android Python 	<ul style="list-style-type: none"> Objective C/Swift C# 	<ul style="list-style-type: none"> OpenMP MPI
Languages (Secondary)	<ul style="list-style-type: none"> Matlab Ruby 	<ul style="list-style-type: none"> HTML/CSS JavaScript 	<ul style="list-style-type: none"> LaTeX x-86/MIPS 	<ul style="list-style-type: none"> Verilog Flex
Miscellaneous	<ul style="list-style-type: none"> LLVM 	<ul style="list-style-type: none"> Adobe Photoshop 	<ul style="list-style-type: none"> Adobe Illustrator 	

RELEVANT COURSE WORK

- Machine Learning
- Natural Language Processing
- Advanced Topics in Software Testing
- Cloud Computing
- Security Engineering
- Social Network Analysis
- Parallel Programming
- Probability and Statistics
- Linear Algebra and Numerical Analysis
- Graph Theory
- Online and Approximation Algorithms
- Virtual Machines
- Decision Modeling
- Planning and Project Appraisal

ACADEMIC PROJECTS

- Incremental and Decremental Parallel Graph Coloring** on GPUs, Dual Degree Project (June, 2014- Present)
 - Analyzed existing parallel graph colouring algorithms and ported some of them to work on nVidia GPUs
 - Incrementalized and Decrementalized the best performing algorithm to work with dynamic graphs
- Real Time Analysis** of Social Media Data and **Sentimental Analysis** on Tweets (August-November, 2014)
 - Analyzed the Garden-Hose **Twitter** data in real time using **Apache STORM** and found the trending hashtags
 - Sentimental Analysis** was performed on the tweets using Stanford Core NLP Library and LingPipe Library
 - Twitter4J**, an unofficial Java library for the Twitter API, was used to access the Garden-Hose Twitter stream
- Dynamic Community Detection** and Analysis in Social Networks (January-May, 2014)
 - Detected social graph communities dynamically by using static detection algorithms at different time stamps

- **Analyzed using different similarity functions** and ran a comparison on different static detection algorithms
- Proposed **four new metrics** to aid with the understanding of dynamic communities and their evolution
- The analysis was run on **MIT Mobility Dataset** as a part of Social Network Analysis paper submission
- **Query Expansion and Suggestion** feature in **XAPIAN** (January-May, 2014)
 - Conceived a query expansion and suggestion module for the open source **search engine library XAPIAN**
 - Integrated the lexical database **Word Net** with XAPIAN to produce candidates for expansion and suggestion
- **Topic Based Text Segmentation** using **Latent Semantic Analysis** (August-November, 2014)
 - Latent Semantic Analysis was used a tool to model the topic distribution in different segments of a document
 - Similarity of sentences was used to cluster them using **agglomerated clustering** and a graph based approach
 - Graph based approach using dynamic programming gave a **20%** better result against agglomerated clustering
- **Spell Checker**, Natural Language Processing (August-November, 2014)
 - Conceived, designed and implemented a spell checker for correcting a non-word error with/without context
 - A **noisy channel model** based approach was used and **Ngrams** were used to model the context of words
 - A linear combination of unigram, bigram and trigram along with a **phonetic** model gave 80% better results
- Module on **Conceptual Dependency Theory** of Knowledge Representation (January-May, 2014)
 - Built a small module which takes in Conceptual Dependency form of knowledge as input and gave as the output their corresponding English language version for a small domain of actions and lexicons
- **MiniJava** Compiler Design and Implementation (August-November, 2013)
 - Built a compiler for a subset of Java, MiniJava, using **Java Tree Builder** and JavaCC
 - Translated MiniJava to **MIPS** through an **IR** in six stages including parsing and lexicalization
- **xv6-JOS Operating System** Design and Implementation (August-November, 2013)
 - Built an operating system called JOS with **Unix-like functions** implemented in an exokernel style
 - JOS is heavily inspired from the simple Unix-like teaching operative system called xv6 (x-86 version 6)
 - Booting, memory management, user-level environments and **preemptive multitasking** were implemented
 - To simplify development, **the x-86 emulator QEMU** was used for development and debugging

POSITIONS OF RESPONSIBILITY

- **Core member**, Quality Management Systems, **Saarang 2016** (April, 2015 – Present)
 - In charge of the audit and **ISO 9001:2008** certification process of the **biggest ever** version of Saarang
 - Mentoring and guiding the 2-tiered **Web and Mobile Operations** team comprising of **20+** members
 - Overseeing a full backend framework shift from **Django to Node.js** and **cross platform app development**
- **Core member**, **International and Alumni Relations**, IIT Madras (April, 2014 – April, 2015)
 - Successfully led the **50+ strong student council** which executed a **\$1,000,000 fund raise** from the alumni
 - Conceived many new initiatives at the Alumni front like **Mentor For Interns** and **Alumni Day of Service**
 - Led a team of 30 that organized Alumni Day, IIT Madras. Attended by 400, **42% more** than that in 2013
 - Acted as the **Team Head** of Creative Design and initiated the lauded 'IIT M Sound Stage' on **IITM TV**
- **Core member**, Concept and Design, **Shaastra 2014** (March, 2013 – April, 2014)
 - Successfully led the 2014 version of the **ISO certified** technical festival to new heights boasting **60+ events**
 - Led and guided the **5-tier** Concept and Design team comprising of **50+ coordinators and 10+ volunteers**
 - Brought about a complete shift to **flat design** positively impacting the outlook and publicity of the tech-fest
- **Coordinator**, **Web Operations**, Saarang 2013 (March, 2013 – April, 2014)
 - Designed, built and maintained a robust website for the 2013 version of **the ISO certified** cultural festival
 - Positively impacted the user experience of the **10,000+ participants** by introducing single page navigation
 - Tracked, collected and analyzed the user data of **50,000+ monthly visitors** of the website aiding other teams

CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

Social	<ul style="list-style-type: none"> • Managerial Team Member, National Service Scheme, IIT Madras <ul style="list-style-type: none"> ▪ Worked in the Publicity team and led the Design and Photography team • Received Star Volunteer Award 2012 from National Service Scheme, IIT M
Entrepreneurial	<ul style="list-style-type: none"> • Runners up, Pitch for Microsoft Contest, 2014
Sports	<ul style="list-style-type: none"> • Member of Hostel Table Tennis Team for Schroeter • Co-Founder and Organizer, IIT Madras Cycling Club • Long Distance Endurance Cyclist having clocked 3000+ kilometres in 2 years <ul style="list-style-type: none"> ▪ Cycled from Chennai to Bangalore in January, 2015 over two days
Cultural	<ul style="list-style-type: none"> • Best photography submission, Microsoft Arty Party, 2014 • Passionate photographer with a Facebook page having 3700+ followers