

# Anand Agrawal

---

Clementi West Street 1  
Singapore  
[www.comp.nus.edu.sg/~anandag](http://www.comp.nus.edu.sg/~anandag)  
anandgarg91@gmail.com, +65 86963961

**OBJECTIVE** To obtain a career that will allow myself to take full advantage of my passion and experience in computer science.

**EDUCATION** *Master of Technology in computer science with 7.68 CGPA* , July 2012 - June 2014  
IIIT Hyderabad, Hyderabad, India

*Bachelor of Engineering in computer science with 73.6 %* , August 2008 - June 2012  
Shri Vaishnav Institute of Tech. and Science, Indore, India

*Senior Secondary with 84 percentage,* July 2007 - June 2008  
Universal Academy, Indore, India

*Secondary with 87.6 percentage,* July 2005 - June 2006  
Baithal H S school, Indore, India

**TECHNOLOGY SKILLS** *Programming Languages:* C, C++, Core Java, Python, Ladderlogic, Scala.  
*Web Technologies:* HTML, CSS, Bootstrap.  
*Database:* MySQL, Sqlite, Postgres, Redis.  
*Development Tools:* Eclipse, Cisco Packet Tracer, Mininet, Web2py, Slick, Latex  
*Area of Interest:* Algorithm and Complexity, Cyber Security, Virtualization.

**EXPERIENCE** *Software Engineer* Since Sep 2017  
National University of Singapore, Singapore

- Working in National Cyber-Security R&D Lab. [Website](#)
- Maintaining a shared national infrastructure that provides computing and networking resources for CyberSecurity research and development community.
- Automating the industrial and enterprise solution.
- Federating the industrial testbeds to enrich its capabilities
- Developing Virtual environment for Critical infrastructure(OT Testbed) and applying formal methods to detect anomalous behavior in system.

*Software Developer* Nov 2016 - Aug 2017  
YuppTV.com, Hyderabad, India

- Worked on project Rivulet (Mutli Screen LIVE and VOD Streaming OTT Platform). <https://platform.yupptv.com/>
- Developed YuppFLIX content crawler for movie and their cast(YuppFlix brings an easy access to Indian movies and TV Shows across 9 regional languages).
- Designed Project for handling Telecom operator service details and API's to fetch country and network code.

- Developed Bazaar kids Category for kid content to broadcast in YUPPTV Bazaar section.

*Research Assistant*

Feb 2016 - Oct 2016

Singapore University of Technology and Design, Singapore

- Worked in a Cyber-Physical Security Project "CYPRO" at SCy-Phy group leading by Assist. Prof Nils Ole Tippenhauer. website link: [Scy-Phy](#)
- CYPRO project is about analyzing the vulnerabilities in Critical Infrastructure and different attack surfaces are investigated on Secure water treatment plant in "iTRUST" lab.

*Assistant Professor*

July 2014 - Jan 2016

Vignan Foundation of Science and Technology in Research University, India.

- Taught subjects on Data Structure and Advance Problem Solving.
- Involved in funded projects along with technical committee team member and published a research paper in ACM & IEEE conference.

**FUNDED PROJECTS**

- Configured E-Learning portal for Vignan's University and deployed the project on cloud server.
- Deployed Faculty Calendar Project on the University Server. The Project is about maintaining the work load of faculties through portal and to avoid paper work in university.
- Automating the details of in-patient and out-patient of Guntur Government Hospital to avoid paper work and to provide easy storage and retrieval of data

**MAJOR AND MINOR PROJECTS**

*Selections of Tags for Tag clouds*

2014

IIIT Hyderabad, Hyderabad, India

- Developed a Tag recommendation model for collaborative bookmarking systems.
- Model receives as input a bookmark of a web page or scientific publication, and automatically suggests a set of social tags useful for annotating the bookmarked document.  
Link:[Project Slides](#)

*Online Chat Summarization*

2014

IIIT Hyderabad, Hyderabad, India

- Developed an automatic text summarizer tool.
- Tool extracts sentences from the conversation to form a summary by investigating new features and generic features set for email/chat conversation.

*Wikipedia Search Engine*

2013

IIIT Hyderabad, Hyderabad, India

- Built an efficient search engine algorithm for searching data in data set around 40GB.

**ADDITIONAL PROJECTS**

*Query Engine*

- Simulation of Query Engine for SQL which parse and execute simple operation like select, where, join and aggregate function using C++.

### *Viral Marketing*

- The idea of exploiting social interactions of users to propagate awareness for products, includes the way we select seeds to maximize the influence overall.

## **RESEARCH**

### *Ongoing research*

- Grouping in Collaborative E-learning environment based on Interaction among students.
- iTHREAT: Framework for internal threat model in Industrial Control System.
- Anomalous detection in SCADA System using rare state dependent invariant.
- VOTNET: Modeling and Simulation approach for Operational Technology

### *Published paper*

- Accepted paper "Towards High Interaction ICS Virtual Honeypot-in-a-Box" in Cyber-Physical System Security and Privacy(CPS-SPC) in conjunction with the 23<sup>rd</sup> ACM Conference on Computer and Communications Security(CCS) in Vienna, Austria.
- Accepted paper "On Ladder Logic Bombs in Industrial Control Systems" in Proceedings of the Workshop on the Security of Industrial Control Systems and of Cyber-Physical Systems (CyberICPS), co-located with ESORICS, 2017
- Conflation of IoT with Raspberry pi 2 for MI Board Interaction. The 3rd IEEE sponsored 3rd International Conference on Electronics and Communication Systems (ICECS 2016), Coimbatore, India. Feb 2016
- Concom Sorting Algorithm (Approach based on counting and comparison).The 4th IEEE International Conference on Computer Science and Network Technology (ICCSNT 2015), Harbin, China. DEC 2015
- Experimental Analysis of Fixed Parameter Algorithms for Odd Cycle Transversals and Feedback Vertex Sets. International Journal of Engineering and Management Research. Vandana Publication, India. Oct 2015
- link: [Google Scholar](#)

## **ACADEMIC HONOURS**

Secured All India GATE Rank 419 and 608 in the year 2014 and 2012 respectively. GATE is the highest Technical level National examination in India for the entrance of post-graduates aspirants in prestigious colleges.

Conducted workshop in PHP and HTML in Chirala Engineering College, Chirala, Andhra Pradesh, India.

## **EXTRA-CURRICULAR ACTIVITIES**

- Technical challenge maker team in Scy-phy week 2016. Scy-phy week is an annual event of SUTD to discuss and mitigate cyber attacks in future.
- Conducted Technical events logic killer and code Exchange in college Mahoutsav technical fest.

Place: Singapore

Date: 16<sup>th</sup> of March 2018

ANAND AGRAWAL