

Abhishek Singh

Bachelors (U.G.-4) Computer Science and Engineering
Indian Institute Of Information Technology - Sri City

Education

14–Present **B.Tech in Computer Science and Engineering, (7th Semester)** *Indian Institute of Information Technology, Sri City, India.*
CGPA : 8.69 (till 6th Semester)

Experiences

- Aug 18–Present **Research Internship**, *Cisco*, Bangalore, India.
○ Continuation of research and open-source efforts made during one year internship program.
- Aug 17–July 18 **Cisco International Internship Program**, *Cisco*, San Jose, California.
○ Worked on machine learning pipeline and systems. Worked on research problems like - intersection of Deep learning and security, AutoML.
○ Contributed to **MLPerf** training workloads.
○ Presented research work at **Cisco Annual Data Science Summit 2018, Prague, Czech Republic.**
- May–June 17 **Summer School on Information Security**, *ACM India*, VIT, Vellore, Tamil Nadu.
○ Attended summer school on information and system security. (acceptance rate 16%)
○ Prominent security researchers from all over India presented and discussed their work.
- July 16 **Penetration Testing Program**, *National Security Database*, Delhi.
○ Participated in 3 day bootcamp program on practical pen-testing skills.
○ Finished the 8-hour pen-testing lab exam successfully.
- Apr–Aug 16 **Feature Creeping and Bug Hunting**, *Google Summer of Code*.
○ Worked with Nmap community for GSOC program.
○ Fixed some of the major bugs in the NMAP's codebase around memory leaks, clock and asynchronous multi-threading
○ Introduced and Improved features like TCP fallback, scanning decoys for IPV6, DNSSEC verification
- Aug 15–May 17 **System and Network Assistant**, *IIIT*, Sri City, Equivalent of Teaching Assistant.
○ Assisted professors and course TAs in setting up IT infrastructure for their courses.
○ Managed servers for important university resources like authentication system, data backup and storage.
- May–July 15 **Network and Server management**, *IIIT Hyderabad and Rekall Softwares*.
○ Participated in a 3 month training and internship program focused on virtualization and automation of system administration tasks.

Research Papers

1) Purushotham Kamath, **Abhishek Singh**, Debo Dutta. Neural Architecture Construction using EnvelopeNets. arXiv:1803.06744

Selected workshops and abstracts

- 1) Purushotham Kamath, **Abhishek Singh**, Debo Dutta. *Fast Neural Architecture Construction using EnvelopeNets*, **NIPS, Meta-learning Workshop 2018**
- 2) **Abhishek Singh**, Debo Dutta, Amit Saha. *MI-GAN: Malware Image synthesis using GANs*, **AAAI Student Abstract and Poster 2019**
- 3) Purushotham Kamath, **Abhishek Singh**, Debo Dutta. *AMLA: an AutoML framework for Neural Network Design*, **ICML, AutoML Workshop 2018**
- 4) **A. Singh**, C. Ojha, R. Musarrat, S. Kumar, H. Venkataraman. *Bluetooth-based Low-Cost Effective Walking Stick For Blind*, **ACM MobiHoc 2016**

Patents

- 1) Knowledge extraction in neural architecture search, filing under process at firm
- 2) Budgeted neural architecture search, filing under process at firm
- 3) Neural architecture construction using envelopenets, pending with US patent office
- 4) Lightweight malware inference architecture, pending with US patent office

Online Courses

- **Practical Reinforcement Learning**, Higher School of Economics, Coursera
- **Deep Learning Specialization**, Andrew NG, deeplearning.ai
- **Reinforcement Learning**, Georgia Tech, CS 8803
- **Machine Learning**, Stanford University
- **Distributed Systems Specialization**, University of Illinois, Urbana Champaign
- **Software Security**, University of Maryland
- **Cryptography**, University of Maryland
- **Bitcoin and Cryptocurrency**, Princeton University
- **Cryptography**, Stanford University
- **Buddhism and Modern Psychology**, Princeton University