

Radhika Ghosal

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EDUCATION

JANUARY 2018 Graduating MAY 2019	Indraprastha Institute of Information Technology, Delhi (IIIT-Delhi) 6 th Semester, B.Tech - Computer Science and Engineering GPA: 7.83/10.0
Relevant Coursework	Computer Graphics, Program Analysis, Embedded Logic Design, Computer Organization Linear Algebra, Wearables, Theory of Computation, GPU Computing

WORK EXPERIENCE

SUMMER 2018	Microsoft Research, Redmond <i>Incoming Summer Research Intern, Computer Architecture Group</i>
MAY 2017 —	École Polytechnique Fédérale de Lausanne (EPFL) <i>Summer Research Intern, Processor Architecture Lab (LAP)</i>
AUGUST 2017	<ul style="list-style-type: none">One of the 50 selected out of 2000+ applicants worldwide, via Summer@EPFL.Implemented a new High-level Synthesis (HLS) technique in LLVM for generating efficient hardware designs from high-level languages (C/C++/OpenCL). Advisers: Dr. Paolo Ienne , Lana Josipovic
AUGUST 2016 —	IIIT-Delhi <i>Undergraduate Student Researcher, Program Analysis Group</i>
DECEMBER 2017	<ul style="list-style-type: none">Working on compiler optimizations for embedded systems; writing transformation passes for LLVM for the AVR architecture, optimizing for power consumption. Advisers: Dr. Rahul Purandare , Dr. Alexander Fell
JULY 2016	MIT Media Lab – LV Prasad Eye Institute, Hyderabad <i>Engineering the Eye 2016, Hyderabad, India</i> <ul style="list-style-type: none">Contributed to the Open Indirect Ophthalmoscope (OIO) project, led by Prof. Ramesh Raskar, MIT.Added hardware support for taking medical-grade images in the dark; auto-focus and capture capabilities in IR light by detecting macular networks within a bounding box.
JULY 2015	GVC Systems, Noida <i>Embedded Systems Intern</i> <ul style="list-style-type: none">Worked on a voice-controlled vending machine commissioned by Star TV, a popular Indian television network, to publicize a national sports league; deployed in Mumbai metro stations.

HONOURS AND RECOGNITION

DECEMBER 2014	Selected for the INOI , the second stage of the Indian team selections for the International Olympiad in Informatics.
JUNE 2012	Was one of the youngest people to complete MIT's first MOOC offered, 6.002x , Circuits and Electronics. Was featured in various international newspapers like the Die Zeit , The Telegraph , and other popular publications .

SKILLS

HARDWARE: Verilog, VHDL, Rapid Prototyping, PCB Designing
SOFTWARE: C, Python, C++, Git, LLVM, OpenGL, Django, GDB
PLATFORMS: Arduino/AVR, x86, ARM, 8051, MSP430, Raspberry Pi

LANGUAGES

FLUENT: English, Hindi, Bengali
BASIC: French

PROJECTS

NOVEMBER 2017	Vastara	A modular wearables system, consisting of sensors and output modules embedded in cloth patches.
NOVEMBER 2016 APRIL 2016	armsimc & armcpu Mapbots	An ARM simulator in C, and a baby ARM CPU in Verilog. Mapped rooms using a ring of ultrasonic sensors mounted on a small robot. Map-generation implemented using the Hough Transform and Kalman Filters.
JULY 2015	Algosaurus	Started a blog to address the need for quality, approachable resources on algorithms. Has received many compliments for its art. (Went viral on Reddit , has received over 100,000 unique visitors till date)

PUBLICATIONS

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- Lana Josipovic, **Radhika Ghosal**, Paolo Ienne; "Dynamically Scheduled High-level Synthesis"
To appear as a full paper in the *Proceedings of the 2018 ACM/SIGDA International Symposium on Field-Programmable Gate Arrays (FPGA)*, Monterey, CA, USA, February 2018.