

Suyash Mahar

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Education

- **Indian Institute of Technology, Roorkee** Roorkee, India
B.Tech., Electronics and Communication Engineering (CGPA: 9.21/10) July 2016 - Present
 - **Coursework includes:** Computer Architecture and Microprocessors*, Digital Logic Design*, Data Structures & Algorithms and Probability & Statistics.
 - * Grade for exceptional performance
- **Inspiration Public School** Haldwani, India
Senior Secondary Education, CBSE (94%) 2014 - 2016

Experiences

- **Undergraduate teaching assistant** ECE Dept., IIT Roorkee, India
For ECN104 - Digital Logic Design January 2018 - present
 - Wrote assignment series on hardware description using Verilog HDL for ECN104.
 - Work includes weekly meetings with freshers facing academic problems.
- **Design of efficient FIB table for NDN routers** CSE Dept., IIT Roorkee, India
Research Project July 2017 - January 2018
 - Worked under [Prof. Vaskar Raychoudhury](#) and [Dr. Divya Saxena](#) on ways to accelerate FIB look ups in NDN routers using re-configurable hardware.
 - Work includes search and FPGA implementation of data structure for longest prefix matching.
- **FPGA implementation of CORDIC algorithms** [\[report\]](#) ECE Dept., IIT Roorkee, India
Short term project May 2017
 - Studied and implemented CORDIC algorithms on FPGA under [Prof. Bishnu Prasad Das](#).
 - Used Python (Jupyter notebook) for modeling and Verilog for design and implementation.
- **Single cycle 32-bit RISC processor** [\[link\]](#)
Hobby project June 2017
 - Created a simple implementation of 32-bit MIT 6.004 architecture with improvements and additions.

Awards and Achievements

- Dedicated member award, National Service Scheme (IIT Roorkee) April 2017
- **Joint Entrance Examination, Advanced (Indian Institute of Technology)** May 2016
All India Rank 1387, 99.3 percentile
- **International Cyber Olympiad (SilverZone)** Dec. 2014
Olympiad Rank 11, State Rank 1

Other Projects

- **.gitignore file manager for Linux** [\[link\]](#) December 2017
Project work includes writing BASH shell script.
- **Triangle art generating views for Android (team size: 3)** [\[link\]](#) March 2017 - May 2017
Uses Delaunay triangulation and custom coloring algorithm for generating views for Android.

Extra-Curricular

- **Mobile Development Group** [\[link\]](#) IIT Roorkee, India
For ECN104 - Digital Logic Design *January 2017 - present*
 - Delivered several institute and group level talks and lectures on Android development and coding practices.
- **National Service Scheme** IIT Roorkee, India
Voluntary work *September 2016 - April 2017*
 - Taught underprivileged students from nearby areas for free of cost.
 - Awarded dedicated member award for overall performance.

Skills

Languages: (System)Verilog, C++, MIPS assembly, SPICE, L^AT_EX, Python, C#.NET, Java, BASH

Software: Vivado, MatLab, LTspice, Visual Studio 2017

Languages: English, Hindi

Interests

Academic: Computer Architecture, Re-Configurable Computing, Embedded systems

Computers: Currently maintaining two applications on GitHub (Android and Windows)

Campus Groups: Active member of IEEE Special Interest Group and Mobile Development Group