

# Hatim Kanchwala

Pre-final Year • Undergraduate • Electrical Engineering • Indian Institute of Technology Patna

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## INTERESTS

Computer Organisation & Architecture • Embedded Systems Design • Adaptive Filters • Neural Networks • Entrepreneurship

## SKILLS

### PROGRAMMING

C/C++ • Assembly • Verilog • JavaScript • Python • HTML/CSS •  $\text{\LaTeX}$  • Shell • Java • OCaml

### SOFTWARE

GNU/Linux • git/GitHub • MATLAB • Simulink • Xilinx ISE • Multisim • Synopsys • Pyxis • MPLAB IDE • Proteus • NumPy/SciPy • Eclipse IDE

### HARDWARE

Xilinx Spartan FPGA • PIC Microcontroller • TMS320 DSP Chip • Arduino • 8051 Microcontroller • Raspberry Pi • Teensy

### LANGUAGES

English • Hindi • Gujarati • Marathi • Urdu • Arabic

## EDUCATION

### INDIAN INSTITUTE OF TECHNOLOGY PATNA

B. Tech. in Electrical Engineering

📅 2014 - 2018 (expected)

📍 Bihta (Bihar), India

CPI: 7.59 / 10.0 (upto 5<sup>th</sup> semester)

## COURSEWORK

Digital Signal Processing • Analog Integrated Circuits • VLSI Design • Embedded Systems • Control Systems • Linear Algebra • Probability & Random Processes • Machine Learning • Finance - Valuation & Investing

## PROJECTS

### FPGA IMPLEMENTATION OF NLMS ADAPTIVE FILTERING ALGORITHM FOR SIGNAL ENHANCEMENT

📅 FEB. 2017 - PRESENT • 🌐 hatimak/akagami

Adviser - Dr Yatendra Kumar Singh

- Implementing Normalized Least Mean Squares (NLMS) adaptive filtering algorithm to extract desired audio from corrupted signal with additive autoregressive noise.
- Prototyping on Xilinx Spartan-3E FPGA in Verilog HDL, with focus towards optimised placing and routing.
- Investigating performance gain by FPGA over typical DSP chip (TMS320).

### 8085 INSTRUCTION SET ARCHITECTURE PROTOTYPE ON FPGA WITH BASIC PIPELINING

📅 JAN. 2017 - PRESENT • 🌐 hatimak/marineford

Adviser - Dr Kailash Chandra Ray

- Implementing Intel 8085 microprocessor ISA on Xilinx Spartan-3E FPGA in Verilog HDL. Developing ASM testbenches to investigate performance gain due to pipelining.

### FINGERPRINT BASED REMOTE ATTENDANCE SYSTEM

📅 JAN. - OCT. 2015 • 🌐 hatimak/den-den-mushi

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## EXPERIENCE

### AFICIONADO VENTURES • Backend Engineer

📅 Startup • 📅 FEB. 2016 - OCT. 2016 • 📍 Gurugram (Haryana), India

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### THE WEAVE • Co-founder & Product Developer

📅 Startup • 📅 JUNE 2015 - DEC. 2015 • 📍 Patna (Bihar), India

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## EXTRACURRICULAR

### COORDINATOR, STARTUP RELATIONS • Entrepreneurship Club, IIT Patna

📅 APR 2015 - PRESENT

- Serving as on-campus mentor to early stage startups, helping entrepreneurs develop business plan, choose investor strategy, and network with domain experts.
- Responsible for building connections with startups and investors, and building investor panel for on-campus startups.
- Part of Core Committee for E-Club's flagship annual event, E-Week. Responsible for organizing guest talks, workshops and pitching event in collaboration with Incubation Centre, IIT Patna.