Anurag Kumar

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Education 2

Indian Institute of Technology, Bhubaneswar

B. Tech in Electronics and Communication Engineering (3rd Year)

CGPA: 9.04 *Aug.* 2023 – *Present*

Experience

Under Dr. Shrinivas Bhoppu

• Developed an 8-bit accumulator-based LiPSi processor in Verilog with a custom instruction set and optimized FSM; deployed on Basys 3 FPGA.

Under Dr. Nijwm Wary

- Completed analog IC design sessions using Cadence Virtuoso (180nm PDK); designed and simulated BGR, V2I converters, LDOs, OTAs.
- Built two-stage, cascode, and folded cascode op-amps; learned biasing, gain improvement techniques, and layout-aware simulation strategies.

Projects

LiPSi CPU Design 🕠

FPGA, Verilog

- Designed an accumulator-based 8-bit processor with custom FSM control.
- Implemented instructions like ADD, LOAD, STORE, JUMP using Verilog HDL.
- Tested and validated with '.mem' programs on Basys 3 board.

Walkie-Talkie (AM Communication)

Circuit Simulation, LTSpice

- Designed a basic walkie-talkie using AM modulation circuit.
- Simulated full duplex system with mic/speaker and transistor amplifier.
- Currently testing for real-world implementation.

Key Skills

- Languages: Embedded C, C++, Python, Verilog, MATLAB
- Tools: Simulink, LTSpice, Arduino IDE, Vivado, Modelsim, GTKwave
- Domains: Embedded Systems, FPGA programming, Analog circuit design, Digital circuit design
- Soft Skills: Leadership, Curiosity, Self-Learning

Positions of Responsibility _

Core Member, Jijñāsā Group

(2023 – Present)

Science, Consciousness & Inner Quest, IIT Bhubaneswar

- · Helped organize events and discussions on science and spirituality.
- · Actively contributed to campus activities on philosophy and inner development.

Hostel Election Candidate

 $(Aug\ 2024)$

IIT Bhubaneswar

· Participated in hostel elections promoting better facilities and unity.

Extra-Curricular Activities

- Participated in hostel elections at IIT Bhubaneswar, showcasing leadership interest and student involvement.
- Member of *Jijñāsā: Science, Consciousness and Inner Quest Group*, engaging in philosophical and intellectual discussions beyond the academic curriculum.
- Made digital posters for jijnasa, image editing, and color grading using tools like Canva, Snapseed often working on enhancing visual quality and storytelling in photos.
- Recreational interest in strategic board games such as UNO and Monopoly, often creating custom variants and rule sets for fun with peers.