RAKESH VAISHNAV

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EDUCATION

•IIT Mandi — *2023*
Communications and Signal Processing — **CGPA: 7.11**

•Government Engineering College, Ajmer — *2018*
Electronics and Communication Engineering — **Percentage: 74.61**

•A.M.G. Sr. Sec. School, Jodhpur — *2013*
RBSE, Board of Higher Secondary Education — **Percentage: 79.40**

•A.M.G. Sr. Sec. School, Jodhpur — *2011*
RBSE, Board of Secondary Education — **Percentage: 86.00**

M.TECH THESIS

•Physical layer security in Cell-Free mMIMO(6G applications). — *Aug 2022 - June 2023*
*Under **Dr. Samar Agnihotri**, SCEE School (Chairperson),IIT Mandi*

- Tools & technologies used: MATLAB, MATLAB GUI, Communication toolbox, 5G toolbox, Signal Processing Toolbox.
- **Summary**: Use physical layer security in cell free mMIMO for securing against different kind of eavesdropping and calculate the achievable secrecy rate. Also calculate and analyze performance of CF mMIMO under passive and active adversaries.

MINI PROJECTS

•Secure Distributed Matrix Multiplication. — *Jan 2022 - Feb 2022*
*Under **Dr. Samar Agnihotri**, SCEE School (Chairperson),IIT Mandi*

- Tools & technologies used: Matlab, Matlab GUI, Signal processing toolbox.
- **Summary**: Secure distributed matrix multiplications with the use of this we can resolve the security issue and as well as we can increase the capacity also. So, we will mainly focus on the techniques like SDMM, SDBMM etc. and the algorithms used in it and checking the dependency of various parameters on security.

•Nano Satellite. — *May 2017 - July 2017*
*Under **Scientist Gaurav Kumar**, ISRO JODHPUR*

- Tools & technologies used: Arduino uno, Raspberry Pi, Multiple environmental sensors.
- **Summary**:Use for environment parameter sensing at different heights and weather using Arduino, node mcu and other parameter sensors.

B.TECH PROJECT

•Using Microprocessor chip(Arduino uno) calculate environmental parameters. — *July 2017 - June 2018*
*Under **Prof. Rajesh Kumar Raj**,ECE Dept., GECA Ajmer*

- Tools & technologies used: Arduino UNO, LCD display and LM35 temperature sensor, ATmega32 microcontroller.
- **Summary**: On a window AC add parameter sensors using Arduino uno (Microprocessor chip) and check the characteristics difference between inbuilt sensors and embedded sensors.

WORK EXPERIENCE

•Software Engineer — *June 2023*(1.2+ years)*
Full-time — Spanidea Systems

•Software Engineer — *April 2023 - June 2023*
Intern — Spanidea Systems

•Tensors under Dr. Adarsh Patel. — *Feb 2023 - June 2023*
Teaching Assistant — IIT Mandi

•5G advanced/6G project, EE department. — *Jan 2023 - Feb 2023*
Project Intern — IIT Hyderabad

•Digital signal processing under Dr. Narendra Kumar. — *Aug 2022 - Dec 2022*
Teaching Assistant — IIT Mandi

•Communication Lab under Dr. Adarsh Patel. — *Aug 2021 - Jul 2022*
Teaching Assistant — IIT Mandi

Project Experience(1.5+ years)

Firmware and Algorithm Development for GNSS Receivers

As a software engineer with 18 months of experience specializing in Global Navigation Satellite Systems (GNSS), I am dedicated to crafting efficient solutions for precise positioning and navigation using satellite signals. My work contributes significantly to advancing location-based technologies, enhancing user experiences, and expanding the capabilities of GNSS-enabled devices.

Technical Skills

Languages : C, MATLAB, Python. **Hardware Tools** : Verilog(VHDL)
Coursework : Digital Communication, Advance Communication Theory, Advance Wireless Theory, Digital Image Processing, Embedded Systems, Applied Optimization, Programming Practicum, IOT Systems, Principles of Computer Networks.

Interests

Areas of Interest :
Communication:
Digital Communication, Wireless Communication(2G/3G/4G/LTE/MIMO/mMIMO/Cell free mMIMO).
VLSI:
Digital Electronics, Verilog VHDL Language.

Positions of Responsibility

•**Sports Coordinator ,** GECA Ajmer   *Aug 2017 - June 2018*

Achievements

•**GATE-2020**
Secured 96.4 percentile in GATE among 83418 candidate in India.   *March, 2020*

Extra-Curricular Activities

•**Secured 1st position** consecutively 2 years in Kabaddi, Kho-Kho, Cricket (GECA Ajmer).

•**Interests and Hobbies :** Cricket, Football, Listening to music.

Declaration

I, **RAKESH VAISHNAV** hereby declare that above mentioned information is correct and best to my knowledge.