

Chinmay A. Shete

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Work Experience

Research Intern

SCTR's Pune Institute of Computer Technology, Pune, Dec 2023 - June 2024

- Done Research on "Nanoparticles Synthesis Technology" for antenna fabrication and analysis.
- This research advances wireless communication by leveraging graphene's versatility and performance benefits.
- Conducted comprehensive literature reviews for 20+ academic journals; synthesized findings into concise reports that informed subsequent research directions, increased publication approval rate by 15 percent, and tried to implement this idea as a product.

Trainer

Amb's C-DSP and Ambekar Associates, in June 2022 and July 2023,

- Conducted comprehensive workshops for the MSBTE University Industrial Training Program, successfully equipping over 100 trainees with industry-relevant skills on two distinct occasions.
- Trained students in subjects like Core Java development and C/C++ programming, focusing on practical, hands-on learning experiences.
- Developed and implemented training materials that enhanced students' understanding and application of programming concepts.

PROJECTS

Design and Analysis of MIMO Antenna (Ongoing)

- Focused on addressing the issue of mutual coupling in MIMO systems, which affects isolation and degrades antenna performance.
- Highlighted the strengths and limitations of each method in reducing mutual coupling, thus providing insights into the practical implementation of high-performance MIMO antennas.
- The project aims to guide future research by summarizing effective isolation strategies, essential for optimizing MIMO antennas used in modern communication systems, 5G, and upcoming 6G technology.

Graphene-Based Patch Antenna

- Engineered and simulated a graphene-based patch antenna using advanced materials.
- Implementing it to enhance signal strength and efficiency.
- Tried to fabricate it and show the simulated results of the Antenna prototype, demonstrating an improvement in performance metrics.

"Kawach" Women Safety Bottle (Arduino, GSM, GPS)

- "Kawach" is the device built inside the bottle that helps women for security purposes. Using buttons, various functions are available like live location sending, message sending, and live calling system to the police station.

SKILLS

Programming Languages

C, C++, Java

Cloud Computing

Azure

CAD Tools

Ansys HFSS

Build Tools

GCC, Makefile

Object-Oriented Programming

5G NR Communication

Operating Systems

Linux & Device Drivers

Antenna Design

Serial Communication Protocols

I2C, SPI, UART

PUBLICATIONS

- The paper titled "System and Method for Women Safety" has been successfully published and selected for the 3rd International Conference for Advancement in Technology (ICONAT 2024), organized by the IEEE Bombay Section.
- Accepted for oral presentation and publication of the paper titled "Isolation Enhancement Techniques for MIMO Antennas in Wireless Communication Systems: A Comprehensive Review" at Information and Communication Technology for Competitive Strategies (ICTCS-2024), Jaipur, India. The paper will be published in the conference proceedings by Springer LNNS.

EDUCATION

2022 - 2025

Bachelor of Engineering - Electronics and Tele-Communications (EnTC), SCTR'S Pune Institute of Computer Technology (PICT)

2019 - 2022

Diploma in Computer Engineering, Vishweshwarayya Abhiyantriki Padvika Mahavidyalaya, Latur

CERTIFICATIONS

- A Beginner's Guide to Linux Kernel Development (LFD103) by Linux Foundation.
- The Altium Education PCB Basic Design Course.
- The Applications of AR using Unity3D and Vuforia.
- Learn C++ Programming - Beginner to Advance by Abdul Bari.
- Mastering Data Structures & Algorithms using C and C++ by Abdul Bari.

Co-Curricular Activities

- Presenter, **IEEE AP-S Conference on Antennas and Propagation**: Presented a project titled *Design and Analysis of MIMO Antenna* alongside team members Varad Kabra and Omkar Mali. Demonstrated innovative antenna solutions to esteemed experts from ISRO, Purdue University, and the Royal Military College of Canada, receiving valuable insights and recognition.
- Attendee, **Workshop on Design, Simulation, and Implementation of Prototype Antenna**: Participated in a workshop sponsored by the Joint Chapter IEEE AP-S, MTT-S, and EMC-S, and hosted by Mr. Aniruddha Kulkarni (Technical Lead, RFLAB Solutions). Gained hands-on experience in antenna design, simulation, and implementation techniques at the Pune Institute of Computer Technology.
- Attendee, **VLSI Opportunities Workshop**: Participated in a workshop led by Dr. Avinash Yadlapati, VLSI Design Manager at Intel, at the Pune Institute of Computer Technology. Gained valuable insights into VLSI design and development, including cutting-edge techniques and industry best practices, through engaging and informative sessions.
- Volunteer, **InC Impetus and Concepts Technical Event**: Assisted in the seamless execution of technical workshops and events, supporting participants and ensuring the events ran efficiently.

ACHIEVEMENTS & AWARDS

- Recognized for delivering insights on MIMO antenna technology to delegates, including experts from ISRO, Purdue University, and Royal Military College of Canada.
- 1st Prize in State Level Paper Presentation Competition "APCOER TECHNOTHON-2021" on "AI in Education," mentored by College of Engineering Pune (COEP) organized by Anantrao Pawar College of Engineering & Research Pune.
- Achieved Rank in the "Virtual Campus Recruitment Program," a state-level event at Sandipani Technical Campus, Latur (2022), and 4th Rank in the same event in 2019.
- The project "Analysis and Simulation of Graphene-Based Patch Antenna" has been shortlisted for evaluation in the InC Impetus technical competition, hosted by Intangles, a Digital Twin Company.