



Albin James Maliakal
Computer Science & Engineering
National Institute of Technology Nagaland
Email : albinjames2002@gmail.com
Mobile Number : +919495401332

B.Tech
Male
DOB: 28/04/2002
 [LinkedIn](#) [GitHub](#)

Examination	University	Institute	Year	CPI / %
Graduation	NIT Nagaland	NIT Nagaland	2025	9.72
Intermediate	CBSE	Placid Vidya Vihar Sr Sec School	2020	95.60 %
Matriculation	CBSE	Placid Vidya Vihar Sr Sec School	2018	95.40 %

SCHOLASTIC ACHIEVEMENTS

- Qualified for Regional **Mathematical Olympiad** organized by Tata Institute of Fundamental Research (2017)
- Ranked in the top **3 %** among **1 million** candidates in JEE Mains 2021 (2021)
- Secured 451 score in GATE Computer Science and Information Technology organized by IISC Bangalore (2024)
- Qualified in GATE Data Science and Artificial Intelligence organized by IISC Bangalore (2024)

TECHNICAL SKILLS

- **Languages:** C/C++, Python, Java, Dart, SQL, \LaTeX
- **Libraries:** NumPy, Pandas, Matplotlib, Scipy, OpenCV, TensorFlow, Scikit-Learn, PyTorch
- **Development:** Django, JS, HTML, CSS, React, Node, Flutter
- **Software:** Git, Wireshark, Docker

KEY PROJECTS

ChromaCut | Image Segmentation (Jul '23 - Nov '23)

- Developed an **interactive** toolkit for **image segmentation** that leverages superpixel over-segmentation and graph-based segmentation techniques
- Applied the **Boykov-Kolmogorov** algorithm on a **superpixel graph** to perform **s-t cuts** and segment the image into foreground and background regions, achieving **89%** accuracy with user scribbles as hard constraints

NeuroCluster | Medical Image Computing (Apr '23 - Aug '23)

- Developed a cutting-edge toolkit for MR **image segmentation** using the **Improved Intuitionistic Fuzzy C-Means (IIFCM)** algorithm, achieving **82%** Sørensen–Dice coefficient
- Segmented MR images into **distinct regions** based on pixel intensity and color values, enabling the identification and analysis of various **brain structures**

FinSpeech | Speech Recognition (Oct '23 - Jan '24)

- Fine-tuned and evaluated a **CRDNN** model for banking dialogue **speech recognition**, leveraging the **HarperValleyBank corpus** and integrating **language models** for context-specific accuracy enhancement
- Achieved significant improvements in **ASR system** performance for the financial sector by training on **Mel Frequency Cepstral Coefficients (MFCC)** features, facilitating advanced customer service automation and dialogue analysis

TerraNet | Remote Sensing (Dec '23 - Feb '24)

- Developed a deep learning model for **land cover classification** using the **U-Net architecture**
- Refined **model accuracy** up to **97%** through training on a **high-resolution satellite** dataset
- Enabled predictive capabilities for new images using the **pre-trained model**, providing a **user-friendly interface** for immediate application without additional training

OTHER PROJECTS

AutoDigit | Image Denoising (Dec '22 - Jan '23)

- Investigated **autoencoder** utilization for image denoising to enhance **handwritten digit recognition** on the MNIST dataset, demonstrating deep learning applications
- Achieved **96%** accuracy in digit classification by training an autoencoder for **image reconstruction** and denoising, significantly improving performance on noisy images

SwitchGain | Computational Finance (Nov '22)

- Developed and implemented **Python-based** trading strategies, leveraging **momentum** and **pair switching** techniques
- Applied algorithms to SENSEX 30 historical data (2009-2020), achieving up to **160%** profits

MAJOR COURSES UNDERTAKEN

Data Structures	Digital System	Computer Architecture	Engineering Mathematics
Numerical Methods	Algorithmics	Operating Systems	Discrete Mathematics
Computer Graphics	Automata Theory	Computer Networks	Data Mining & Data Warehousing
Compiler Design	Graph Theory	Distributed Computing	Database Management System

POSITIONS OF RESPONSIBILITY

- Organizer | *Ekarikthin '24*(Mar '24)
- Planned and executed the annual university techno-cultural fest that showcased the technical and cultural talents of the students
 - Coordinated the development of the **event website**, ensuring its functionality, design, and content
 - Demonstrated skills in **project management**, teamwork, communication, and problem-solving

EXTRACURRICULAR ACTIVITIES

- Winner** of Pitch It, a **startup pitch** competition organized by Entrepreneurship Cell, NIT Nagaland(2024)
- Received **special mention** for topic presentation competition organized by NIT Nagaland(2023)
- Winner** of Science Meme, a meme-making competition organized by NIT Nagaland Science Society(2023)
- Competed in the MaRRS **Spelling Bee** School Championship at the inter-school level(2014)
- Reached the final round of the ALRIS'23 **Science Quiz** as one of the top 4 teams(2023)

INTEREST & HOBBIES

- Swimming
- Mountain Biking
- Hiking
- Gardening

LANGUAGES

English	Native / Bilingual Proficiency
Malayalam	Native / Bilingual Proficiency
Deutsch (Deutschland)	Limited Working Proficiency
Spanish	Elementary Proficiency
French	Elementary Proficiency