

## NIKHIL CHOWDARY PALETI

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### EDUCATION

- Amrita Vishwa Vidyapeetham University Coimbatore, India  
**Bachelor of Technology, Computer Science and Engineering (AI), GPA: 9.10/10.00** 2020 - 2024

### PUBLICATIONS

- Iswarya Kannothe Veetil, Divi Eswar Chowdary, **Nikhil Chowdary P.**, V. Sowmya, E.A. Gopalakrishnan, (2024). "An analysis of data leakage and generalizability in MRI based classification of Parkinson's Disease using explainable 2D Convolutional Neural Networks," Digital Signal Processing, Volume 147, pp. 104407, ISSN 1051-2004, <https://doi.org/10.1016/j.dsp.2024.104407>
- Nikhil Chowdary, P.** et al. (2023). "A Few-Shot Approach to Dysarthric Speech Intelligibility Level Classification Using Transformers," 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), Delhi, India, 2023, pp. 1-6, doi: 10.1109/ICCCNT56998.2023.10308067
- Nikhil Chowdary, P.** et al. (2023). "Enhancing Knee Osteoarthritis severity level classification using diffusion augmented images," Proceedings of the International e-Conference on Advances in Computer Engineering and Communication Systems (ICACECS 2023), pp. 266-274, doi: 10.2991/978-94-6463-314-6\_27
- Nikhil Chowdary, P.** et al. (2023). "Face Mask Detection Using Transfer Learning and TensorRT Optimization." In: Hassanien, A.E., Castillo, O., Anand, S., Jaiswal, A. (eds) International Conference on Innovative Computing and Communications. ICICC 2023. Lecture Notes in Networks and Systems, vol 703. Springer, Singapore. doi: 10.1007/978-981-99-3315-0\_63
- Nikhil Chowdary, P.** et al. (2023). Improving Reinforcement Learning Agent Training using Text based Guidance: A study using Commands in Dravidian Languages. In Proceedings of the Third Workshop on Speech and Language Technologies for Dravidian Languages, pages 33–42, Varna, Bulgaria. INCOMA Ltd., Shoumen, Bulgaria. (<https://aclanthology.org/2023.dravidianlangtech-1.5>)
- Krishna Rayalu G, **Nikhil Chowdary, P.** et al. (2023). "A Zigbee Based Cost-Effective Home Monitoring System Using WSN," 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), Delhi, India, 2023, pp. 1-7, doi: 10.1109/ICCCNT56998.2023.10306580
- Nikhil Chowdary, P.** et al. (in-press) Unleashing the Power of Dynamic Mode Decomposition and Deep Learning for Rainfall Prediction in North-East India. In: International Conference on Computation of Artificial Intelligence & Machine Learning. ICCAIML 2024. Communications in Computer and Information Science. Springer [presented on Jan 18, 2024]

### ACADEMIC PROJECTS

- AI-Powered Real-time Sales and Recommendations (Sep 2022 - Jan 2023):** Designed and implemented a system for an efficient checkout process. Used embedded devices, real-time data streaming through MQTT, kafka, spark and MongoDB as database. Constructed robust exploratory data analysis and recommendation systems using SparkML.  
**Grade:** A; **Role:** Lead (3 members)
- Robust Principal Component Analysis for Image Denoising (Mar - Jul 2022):** Implemented face denoising through Robust Principal Component Analysis (RPCA), leveraging Principal Component Pursuit by Alternating Directions. Demonstrated outliers' impact on PCA and validated RPCA's efficacy on the Yale B database (2414 images).  
**Grade:** A+; **Role:** Lead (4 members)

### WORK EXPERIENCE

- ML Engineer Intern | Tech Profuse, Hyderabad, India** Aug 2023 - Present
- Built a smart support chatbot using LLAMA-2 model by meta and langchain library to reduce burden regarding technical issues on the support team
  - Developed an LLM-based information retrieval system using vector databases, improving the support team's response time.

### CERTIFICATIONS

- Deep learning Specialization (5 courses), DeepLearning.AI, [Coursera](#) Feb 2023
- Getting Started with AI on Jetson Nano, [Nvidia Deep learning Institute](#) Dec 2021
- Complete Python Developer in 2020: Zero to Mastery, ZTM Academy, [Udemy](#) Aug 2020

**TECH SKILLS:** Python (Numpy, Pandas, Matplotlib, Tensorflow, SK-Learn, Hugging Face, Langchain), Matlab, Julia, Full Stack (HTML, Bootstrap, React), App Development (Flutter), Robotic Operating System (ROS)

### EXTRACURRICULARS

- Programme Committee and Reviewer, DravidianLangTech-2023 Workshop, RANLP, Varna, Bulgaria Sep 2023
- Organizer, workshop on LLM applications using langchain and streamlit, Anokha tech fest, Amrita May 2023
- Parade head, gokulashtami cultural fest, Amrita Sep 2022