Gayathri Akkinapalli

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Graduate Program: M.S Computer Science   **Mail:** gayathri.akkinapalli2000@gmail.com

Education

University of Massachusetts Amherst   *USA*

MS COMPUTER SCIENCE WITH CONCENTRATION IN DATA SCIENCE   *Aug 2023 - July 2025*

- CGPA: **4.0/4.0**
- Courses: Reinforcement Learning, Responsible AI, Methods of applied statistics

Indian Institute of Information Technology Design & Manufacturing, Kurnool   *India*

BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING   *Aug 2017 - June 2021*

- CGPA: **9.07/10.0**
- Worked on various domains and projects, predominantly on Data Science and Machine Learning

Work Experience

Carelon Global Solutions   *Hyderabad, India*

SOFTWARE ENGINEER III   *Jun 2021 – July 2023*

- Data Scientist:
  1. Designing and developing Machine Learning models and recommendation systems using traditional algorithms along with Data Science concepts like NER, spaCy, Cosine similarity, popularity, uniqueness to generate features from the historic data and BERT to automate and assist health care.
  2. During exploration and evaluation of the model, Logistic Reg, Random Forest, XGBoost, MAP@K, MRR, NDCG, Recall@K are used, focusing data consolidation and feature selection for enhancing the model.
  3. Worked on Kubeflow AWS, S3 and GlueDB, PoC on Self care management tool
  4.I developed careplans for various health care programs that provide relevant guidelines, goals and interventions as recommendation to the care manager based on the assessment response of the patient's health condition.

- AI Engineer:
  1. I have experience in integrating ML models in the ENSO pipeline for real-time execution and building various APIs.
  2. Developed and deployed the careplan flow automation which includes integration of rule based model along with building APIs that receives the assessment responses on patient's health conditions, executes and responds back with careplan as a recommendation using the data from MongoDB or Redis in real time.
  3.Developed Splunk Dashboard with various metrics generated and captured from the user feedback on the care plan recommendations that contributes in Model enhancement.

- Python Developer:
  1. Worked on enhancing the IBM Watson Assistant Skill, a chat bot for providing effective interaction and services to the users of a web portal.
  2. I have also worked on metrics automation to generate required metrics from the chat bot conversations and scheduling a Lambda function to extract the conversational data from IBM object storage to S3.
  3.Developed basic sentiment analysis on the conversational data and a PoC on AWS Glue, dynamoDB.

SensorDrops Networks Pvt Ltd. (STEP at IIT Kharagpur)   *Hyderabad, India*

SOFTWARE DEVELOPMENT INTERN   *Aug 2020 – Sep 2020*

- During Covid, developed a Realtime Social Distance Monitoring System based on computer vision using YOLO V3 model for object (person) detection, which is used for calculating and monitoring social distancing.
- Developed a website that can live stream four cameras at a time and display various metrics on daily, weekly and monthly basis. Hosted this video surveillance system application in AWS EC2 for better accessibility and scalability.

Centre for Development of Advanced Computing (C-DAC), Pune   *Hyderabad, India*

SOFTWARE DEVELOPMENT INTERN   *May 2020 – Aug 2020*

- Developed a prototype of Customized deep CNN based model to identify covid infected chest X-rays. This was implemented on HPC using three classes of chest X-ray images namely covid, non-covid and normal for training.
- An improvement on VOS and VOT along with CNN-based semi-supervised learning techniques were implemented.

Articles & Preprints

[1] Reinforcement learning algorithms: An Overview

THIS PROJECT EXAMINES FIVE REINFORCEMENT LEARNING ALGORITHMS: REINFORCE WITH BASELINE, ONE-STEP ACTOR-CRITIC, SEMI-GRADIENT SARSA, SEMI-GRADIENT N-STEP SARSA, AND TABULAR DYNA-Q. ADDITIONALLY, WE DELVE INTO THE IMPLEMENTATION DETAILS THROUGH PSEUDO-CODE, FINE-TUNING PROCESSES, AND OBTAINED RESULTS ON STANDARD ENVIRONMENTS LIKE CARTPOLE, ACROBAT, AND 687- GRID-WORLD.   *Sep 2023 - Dec 2023*

[2] Automated Model Selection for Tabular Data

Avinash Amballa, Gayathri Akkinapalli, Anmol Mekala, Manas Madine, Naga Pavana Priya Yarrabolu, Przemyslaw A. Grabowicz

Sep 2023 - Dec 2023

Projects

HOME Decor Virtual Reality application

IIITDM   *Jan 2021 - Mar 2021*
- Built a VR app that can render 3d models of houses. This application was tested on oculus quest 2, it enables the user to spawn multiple houses and objects, interact with them, modify wall colors and objects according to the wish to furnish the house.
- Written a research/application paper on the VR app, awaiting submission for publication.

DIY-Home AR App

IIITDM   *Nov 2020 - Dec 2020*
- Developed an android AR application to design home Interior by virtually placing products. This app is customized for Furniture and various textures for Flooring and Wall painting.

Sentiment Analysis

Smart Indian Hackathon 2020   *Jan 2020 - Mar 2020*
- Developed a sentiment Analysis model over Amazon Customer Reviews by padding, embedding and running it over Gated Recurrent Units based Neural Network to classify into positive or negative reviews.
- Achieved 95% of accuracy and was one among the top 3 ideas of our institute.

16 Bit Processor

IIITDM   *Oct 2019 - Nov 2019*
- As part of the curriculum for VLSI course Programmed a 16-bit Processor. It contains 8 functionalities namely, Addition and Subtraction (Recursive doubling method), Multiplication (Wallacetree), Division (Non-restoring technique) along with logical oprerations and logical shifters.

Skills

Coding	C, Python, Java(Intermediate), R(Intermediate), C++(Intermediate), HTML, CSS, SQL, JS
Tech Stacks	AWS (S3, EC2, Lambda, DynamoDB, Glue), Kubeflow, ENSO (ML) Pipeline, OpenSearch, IBM Watson Assistant, Splunk, OCP (k8s), MongoDB, Unity3D, Anaconda, Hive, MinIO
Technologies	NLP, Data Science, Machine Learning, Artificial Intelligence, Virtual Reality, Augmented Reality, Image Processing, Deep learning

Scholastic Achievements and Leadership

2022	**Received GoAbove Impact awards** from Elevance Health (Parent of Carelon Global Solutions)
2019-20	**Technical Lead** for Coding club of IIITDM Kurnool
2019-20	**Badminton coordinator** at Institute Sports Club
2019-20	**Organized workshops** in the Institute on 3D Printing and Cyber Security
2019-20	**Member of class review committee** to represent our branch Computer Engineering
2019	**Received Batch Topper award** from the Head of the Institute, Director of IIITDM Kurnool
2019	**Art Club coordinator** for the Institute Techno Cultural Fest

EXTRA CURRICULAR ACHIEVEMENTS

2010	**Recieved Guinness world record** for participating in the largest Kuchipudi dance "Maha Brinda Natyam" consisted of 2850 participants, for Second International Kuchipudi Dance Convention by Silicon Andhra
2013	**Selected and Participated in District and State level** as young scientist for the 21st National Children Science Congress
2013	**Selected and Participated in Judo** in Judo District and State level competition

Personal Info

DOB: July-10-2000

Language known: English, Telugu, Hindi

Strength: Perseverant, Adaptive nature, Quick Learner, Self motivated and Sincere towards responsibility