

# THILAK REDDY DHARAM

Buffalo, NY | +1 716 256-7394 | [thilakre@buffalo.edu](mailto:thilakre@buffalo.edu) | [ThilakReddy](#) |

[LinkedIn](#) | [Github](#)

## EDUCATION

UNIVERSITY AT BUFFALO, SUNY

Buffalo, NY

Master of Science

Expected Dec 2023

Major in Computer Science;

Cumulative GPA: 3.45/4.0.

Relevant Coursework: Analysis of Algorithms, Information Retrieval, Machine Learning, Pattern Recognition, Data Intensive Computing, Reinforcement Learning, Deep Learning, Data Models and Query Languages.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

Hyderabad, Telangana, INDIA

Bachelor of Technology

Jul 2017-Jul 2021

Major in Computer Science;

Cumulative GPA: 8.1/10.0.

## TECHNICAL SKILLS

**Languages and Web Technologies:** Python, JavaScript, C/C++/C#, Java, R, SQL, Go, HTML/CSS, React.js, Dart, Node.js, REST, SOAP.

**Tools and Frameworks:** Tableau, Numpy, Matplotlib, TensorFlow, OpenCV, Visual Studio, Unix/Linux, Android Studio, Flask, Jupyter Notebook, Flutter, Django, Git/GitHub, System Design, Scrum Methodology, AWS, Unit Testing, Debugging, Telerik JustMock.

## WORK EXPERIENCE

HEXAGON CAPABILITY CENTER INDIA PVT. LTD, HYDERABAD

INDIA

Software Developer

Jul 2021-Jul 2022

- Optimized the Intergraph Smart3D application search engine, integrating advanced indexing, caching, and UI/UX enhancements leading to 70% user engagement and a reduction in customer complaints by 10%.
- Conceived and developed intricate WPF pages tailored for custom commands as part of the core application, enhancing the user experience for over 50,000 customers, which led to a 25% increase in user engagement and praise for intuitive design during feedback sessions.
- Migrated and integrated 3D objects, ensuring seamless accessibility and consistent user experience on cross-platform devices.
- Led a team of 4 to author comprehensive unit tests for over 5 microservices, resulting in a 20% reduction in product defects and a 15% improvement in deployment efficiency.

EXPOSYS DATA LABS, HYDERABAD

INDIA

Software Development Intern

Apr 2021-Jun 2021

- Optimized workflow by implementing a user-friendly and responsive design for a Video chat Web-App using Flask along with Bootstrap for frontend, leading to a 30% reduction in user onboarding time and a 20% increase in customer satisfaction ratings.
- Implemented virtual backgrounds with OpenCV, integrated OAuth via Flask-OAuthlib for authentication, and added screen recording capabilities using PyGetWindow, achieving a 75% surge in user engagement.
- Leveraged WebRTC and Socket.io with Flask to improve seamless call efficiency by 80% during group calls with participants.

## UNIVERSITY PROJECTS

DEEP REINFORCEMENT ALGORITHMS (PYTHON, NEURAL NETWORKS)

May 2023

- Implemented Deep Q-Networks (DQN), Double DQN (DDQN), Actor Critic, Advantage Actor Critic Algorithms to solve custom multi-Agent environments such as Tic-Tac-Toe, Rock Paper Scissors and Switch Game.
- Built a custom model using innovative techniques like experience relay methods, enhancing performance of existing algorithm, achieving over 92% accuracy.

SONARSCORE: ADVANCED MUSIC TREND FORECASTING (PYTHON, FLASK, MACHINE LEARNING)

Jan 2023

- Orchestrated application of diverse Machine Learning algorithms, encompassing regression, clustering, and classification techniques, to prognosticate song popularity.
- Designed and composed an interactive Web-App using Flask and HTML/CSS for users to play with custom input features such as Energy, Loudness, and Acousticness, aiding in predicting song's popularity gaining an accuracy over 88%.

CHATBOT SEARCH SYSTEM FOR REDDIT (PYTHON, APACHE SOLR, GOOGLE CLOUD (EC2, S3))

Dec 2022

- Collaborated with a team to develop a search system using Reddit's REST API data; indexed in SOLR using BM25 and Language models, enhancing result accuracy.
- Designed a custom Dismax Parser plugin translated queries in multiple languages and boosted relevant results using NLP.
- Implemented a Naive Bayes classifier to differentiate between search results and generic queries utilizing bag of words and TF-IDF features, achieving 85% classification accuracy on a test data set.
- Co-led the deployment of a Flask-based chatbot interface on a cloud platform, resulting in a 7% improvement in MAP score through collective feedback.