

## EDUCATION

<b>Master of Science in Computer Science</b> , <i>Texas A&amp;M University, College Station</i>	Aug 2021 - Jun 2023
<b>Bachelor of Technology in Electrical Engineering</b> , <i>Indian Institute of Technology (IIT) Tirupati</i>	Aug 2015 - May 2019

## SKILLS & RELEVANT SPECIALIZATION

<b>Programming</b>	Python [Pytorch, TensorFlow, OpenCV, Sklearn, Rasa, FastAPI], Javascript, Reactjs, SQL, Docker.
<b>Specializations</b>	Deep Learning, Pattern Recognition and Machine Learning, Analog Circuits, Computer Vision, Complex Variables, Artificial Intelligence, Calculus, Image Processing, Linear Algebra, Optimization Techniques

## PATENTS

<b>US-PATENT[12001463] - Edge Computing Units for Operating Conversational Tools at Local Sites</b> <i>Inventor</i>	<b>Jun. 2024</b> <i>Seattle, Washington</i>
<b>US-PATENT[11960515] - Edge Computing Units for Operating Conversational Tools at Local Sites</b> <i>Inventor</i>	<b>Apr. 2024</b> <i>Seattle, Washington</i>

## WORK EXPERIENCE

<b>Lead AI Engineer, Generative AI LLMs</b> <i>Armada AI</i>	<b>Jul. 2023 - Present</b> <i>Seattle, Washington</i>
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- Pioneered the development of advanced AI assistive systems leveraging Large Language Models (LLMs) as versatile agents, encompassing: (1) online context-aware chatbots capable of answering, troubleshooting, and addressing user-specific and time-dependent queries; (2) implementation of Retrieval Augmented Generation for dynamic, account-aware responses; (3) custom follow-up questioning for parameter gathering to interface with external data sources; and (4) innovative application in robotic control, including conversational drone flight scheduling.
- Engineered a robust full-stack solution to operationalize the chatbot, incorporating Redis for caching, SQL databases for persistent storage, and efficient session management. Developed and exposed the chatbot functionality as an API, crafted an intuitive user interface, and leveraged Docker containerization. Configured Kubernetes (K8s) deployments for optimal scaling, performance, and orchestration of microservices architecture.
- Successfully demonstrated the project's capabilities in various settings, which directly led to securing substantial investor funding and attracting multiple companies as customers, significantly contributing to startup growth and market presence.

<b>Machine Learning Engineer</b> <i>Fincare Small Finance Bank</i>	<b>Jun. 2019 - Oct. 2020</b> <i>Bangalore, India</i>
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- Engineered an NLP-based banking chatbot using BERT transformer models for intent classification and entity extraction, working with a variety of structured and unstructured data sources.
- Designed and improved core NLP components for ID card detection, field extraction, and field masking to ensure privacy, incorporating the latest research, technologies, and techniques directly into a production environment.

## PROJECTS

<b>Any-to-Any Voice Conversion using Transformers</b> <a href="#">Link to presentation</a> <i>Texas A&amp;M University</i>	<b>Feb. 2022 - May. 2022</b> <i>College Station, Texas</i>
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- Extracted linguistic features and voice identity from utterances, utilizing them independently to achieve versatile voice conversions with transformers for training, resulting in clear synthesized speech and successful voice conversions.

<b>Repaper - Python Package</b> <a href="#">Link to Github</a> <i>Open-source Contribution</i>	<b>Oct. 2022 - Nov. 2022</b>
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- Developed a Python package to generate editable PDF forms or online forms from sample form images using LayoutLM and easy-ocr for key-value pair identification and text information extraction.

<b>Mailcheck.ing</b> <a href="#">Link to Website</a> <i>Founder</i>	<b>Jun. 2021 - Jul. 2021</b> <i>Hyderabad, India</i>
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- A real-time email validation API to check deliverability of the email by contacting the SMTP server. Techstack used FASTapi, Docker, NextJs, Supabase, and Stripe.

<b>MixRNet</b> <a href="#">arXiv</a> <i>Texas A&amp;M University</i>	<b>Sep. 2021 - Nov. 2021</b> <i>College Station, Texas</i>
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- Mixup regularization technique to enhance ResNet50 image classification task achieving an error of 4.87% on the CIFAR-10.

<b>Research Assistant (NSF Funded)</b> <i>Texas A&amp;M University</i>	<b>Jan. 2022 - Dec 2022</b> <i>College Station, Texas</i>
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- Enhanced pancreatic cancer prediction by reducing features and increasing recall using advanced machine learning techniques, incorporating state-of-the-art techniques like Mixed Precision on Transformer networks.