

# Gokulakannan Sakthivel

Chennai, India- 600116

Email: [gkannan.sakthi03@gmail.com](mailto:gkannan.sakthi03@gmail.com) | Website: [gokushashira.github.io/](https://gokushashira.github.io/)

## OBJECTIVE

AI engineer, honored for proficiency in Microsoft Azure, AWS Cloud, DevOps, Generative AI, ML, and Python, in pursuit of a career as a Data Scientist specializing in NLP.

## EDUCATION

**INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI**, India  
Micro credit Program in Computer Science

June 2024 - June 2025  
**Cumulative GPA: 7.05/10.0**

Relevant Coursework: Mathematics for Computer Science, Introduction to Computer Science and Programming, Data Structure and Algorithms, Database Systems

**NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA**, India  
Bachelor of Technology in Chemical Engineering (**Honors**)

June 2018 - June 2022  
**Cumulative GPA: 8.17/10.0**

Relevant Coursework: Mathematics I, II (ODEs, Matrix Theory, Vector & Differential Calculus), Basic programming in C, Chemical Engineering Mathematics, Numerical Analysis

## WORK EXPERIENCE

**CENTRE FOR RESPONSIBLE AI, IIT MADRAS**  
*AI Engineer*

Chennai, India  
Mar 2025 – Now

- Presented my work at WSAI Research Showcase for building an Evaluation Framework for Indian AI Applications.
- Curated high quality dataset covering **30 metrics** to evaluate the framework by LLM as Judge.
- Surveyed **120 metrics** and distinguished them as programmable or data driven.
- Planned and developed the framework architecture covering possible failover modes.

**THIRDAI AUTOMATION(Former Stealth)**  
*Applied Data Scientist*

U.S. Based, Remote  
Jan 2025 – Mar 2024

- Owned and managed the complete RAG (Retrieval-Augmented Generation) and ML backend infrastructure, building and maintaining robust APIs using Flask, for seamless integration on AWS EC2 machines for the product.
- Built custom document retrievers for document varieties and internal pipelines to support RAG architecture.
- Explored the feasibility of GraphRAG.

**ELI LILLY AND COMPANY INDIA**  
*Senior Machine Learning Engineer*

Bengaluru, India  
Nov 2024 – Dec 2024

- Promoted to Senior Machine Learning Engineer-I(Nov 2024)**, for demonstrating exceptional ownership and expertise in managing backend infrastructure. Successfully handled the complete Azure and AWS infrastructure for two major projects, ensuring seamless deployment, scalability, and reliability. Recognized for independently overseeing all infrastructure-related aspects and driving project success. Delivered an HR policy chatbot by collaborating with Microsoft, internal Azure, and Lilly business teams. Led the infrastructure team to optimize the Azure-backed chatbot, addressing latency issues and enabling selective content management for improved performance.

*Machine Learning Engineer*

Oct 2023 – Nov 2024

- Promoted to Engineer-I(Mar 2024)**, worked on handling the entire backend in AWS Cloud which includes the inference and indexing pipelines. Good work experience in AWS Services and DevOps(Cloudformation, SAM, Lambda, API Gateway etc) as well as Azure(OpenAI, RBAC, Service Principal and basic cloud infrastructure) and Github Actions(CICD).
- Completely delivered backend ML architecture along with CICD in AWS Cloud for a product with 1000 users.

*Azure Cloud Engineer*

July 2022 – Oct 2023

- GenAI Hackathon Runner-Up**: Led a team of 2 members and achieved the runner-up position by creating a chatbot driven by LLaMA LLM.
- ServiceNow-JIRA Integration**: Solely implemented the solution by automation using Python which helped in reducing the effort of manually creating tasks to 80%.
- Key Projects**: Actively participated in DevSecOps Pipeline Creation, Policy as Code Implementation, Transition from Azure DevOps to GitHub Actions, Migration from ARM to Bicep Template, and many more.

## RESEARCH EXPERIENCE

**UNIVERSITY OF LIVERPOOL**  
*Natural Language Processing Intern*

Remote  
Apr 2023 – July 2023

- **Task-Oriented LLM:** Investigated the ability of models like FLAN-T5 and GPT-2 on Task-Oriented Settings like Dialog conversations from Google's Task Master Dataset under the guidance of Prof. Procheta Sen.
- Link: InstructionLLM-QnA

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS**  
*Machine Learning Intern*

Chennai, India  
May 2021 - Aug 2021

- **Polymer Phase Transition Prediction:** Implemented Principal Component Analysis and other dimensionality reduction techniques to predict the critical temperatures of phase transition in polymers from Chain to Globule State under the supervision of Prof Tarak Patra.

**INDIAN SPACE RESEARCH ORGANISATION**  
*Deep Learning Intern*

Remote  
Jun 2020 - Feb 2021

- **Land Use and Land Cover Classification:** Implemented Unet architecture to classify land-use and land-cover of geospatial data obtained from Sentinel Hub under the supervision of Scientist Rosly Boy Lyngdoh. Investigations are reported here.

## PROJECTS

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**TASK ORIENTED LARGE LEARNING MODEL EVALUATION**

Apr 2023

- Research-driven project conducted in collaboration with Professor Procheta, focusing on the analysis of LLM (Large Language Model) behavior, specifically Flan-T5. This project involved training Flan-T5 using various data-driven methodologies on the Taskmaster dataset.
- Also, we tried replicating the Dialog Inpainting paper to understand how to design a large learning model to create a dialog-based architecture only with contexts. Tech: Python, Pytorch, HuggingFace

**MACHINE LEARNING AND DEEP LEARNING ON VAPOR LIQUID EQUILIBRIUM PREDICTION OF CARBON DIOXIDE OVER AMINES**

Jun 2022

- Final year thesis under Prof. Madhushree Kundu that involved using machine learning and deep learning techniques to predict Vapour liquid equilibrium of carbon dioxide capture over various amines like MEA, AMP, DEAE, etc.

## TECHNICAL SKILLS

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- **Languages:** Python, MATLAB(Basics), Java(Basics), Powershell, YAML, C++
- **Frameworks:** Flask, OpenAI, HuggingFace, Pytorch, Tensorflow, Pandas, Numpy, Scikit-Learn, Langchain
- **Tools:** Git, GitHub Actions, Github
- **Platforms:** Azure Cloud, AWS Cloud, GCP

## AWARDS AND CERTIFICATIONS

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- RISE Award for best performing employee(Q1) and RISE Award for fastest project delivery(Q2 and Q3)
- Generative AI with Large Learning Models, AWS Coursera - November 2023
- Microsoft Azure Fundamentals AZ-900 - December, 2022
- IBM Data Science Specialization, IBM Coursera - June 2021
- Deep Learning Specialization - July 2020

## VOLUNTEERING EXPERIENCE

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**INSTITUTE COUNSELING SERVICES NITRKL**  
Mentor

NIT Rourkela, India  
2019 – 2022

- Guided 4-5 freshmen every year on behalf of the committee and assisted them with adapting to academic and non-academic environments at NIT.

**AASRA**  
Member

NIT Rourkela, India  
2020 – 2021

- Taught underprivileged students from the OSAP community and found joy in meaningful interactions with them.

## ADDITIONAL

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**Leadership Roles:** Leader of Generative AI Hackathon team (2023), Design Coordinator of Indian Institute of Chemical Engineers Club and Microsoft Campus Club (2021), Vice-Captain of OSAP Aasra Community (2021)

**Languages:** Proficient in English, Tamil and Hindi

**Hobbies:** Anime, Gym and Yoga