

SENTHIL KUMAR

senthilkumar.m1901@gmail.com • +91-984-186-9609 • [GitHub](#) • [LinkedIn](#) • [Blog](#) • [Medium](#) • Chennai, India

- An ML Engineer capable of building NLP applications leveraging deep learning models
- An AWS Cloud Engineer specialized in developing & deploying event-driven Serverless architectures
- (Since mid'23) A GenAI Engineer immersed in the development of LLM api-powered and agentic apps
- Total Exp: 14 years; Data Science & NLP Exp: 10/14 years; Cloud Engineering: 4/14 years

WORK EXPERIENCE

Lead ML Engineer, Toyota Connected India **Jul 2022 – Present**

- Build BackEnd data pipelines and NLP applications in AWS cloud to aid Connected Car customers
- Published 4 articles in TCIN medium channel
- Presented a seminar on Serverless Python App in PyCon2023

Lead Data Scientist, Ford, Analytics Team **May 2018 – Jun 2022**

- A hands-on **data science developer** who co-developed with NLP experts from the US team
- Leveraged open source models for inferencing in dockerized NLP applications

Assistant Manager, LatentView Analytics (LV) **Apr 2014 – Apr 2018**

- Roles I played: **NLP Data Scientist, Project Delivery Manager**
- Responsible for project scoping and accountable for the delivery of Social Media Analytics projects of 8+ members

Lead Analyst, Beroe Inc **Jul 2010 – Dec 2013**

- Produce Market Research reports on how to procure indirect spend categories

CAREER PROGRESSION & PERFORMANCE AWARDS

Company	Position Change	Years since joining	Awards/Recognitions
Toyota	Senior ML Engineer to Lead ML Engineer	1.5 years	1. Employee of the Month (Sep'23)
			2. <u>Hackathon Team Winner (Mar'23)</u>
			3. <u>Secured 2nd place in AWS India Mfg Teams Hackathon 2024</u>
Ford	Senior Data Scientist to Lead Data Scientist	1.5 years	Asia-Pacific Recognition Award (May'19)
LatentView	Senior Analyst to Assistant Manager	2.5 years	Encore Award (Jul-Sep 2016 quarter)
Beroe	Promoted twice	3.5 years	Knowledge Contributor Awards (twice in 2013)

EDUCATION

- Bachelors in Engg - Electronics - 8.6 CGPA
 - Madras Institute of Technology, 2006 - 2010
 - 12th Grade - 95% | 10th Grade - 92%
 - State Topper in Physical Science paper (50/50), 2006 TN Engineering Entrance Exam
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TECHNICAL UPSKILLING

Online Courses

- [DevOps on AWS Specialization\(4 courses\)](#), Coursera-AWS, Oct'24
 - [Generative AI with LLMs](#), Coursera-Deeplearning.ai, Nov'23
 - [DeepLearning Specialization\(5 courses\)](#), Coursera-Deeplearning.ai, Dec'18 - May'19
 - [ML Fundamentals for Structured Data \(2 courses\)](#), Kaggle Learn, Jan-Feb'22
 - [Applied Text Mining \(2 courses\)](#), Coursera-MichiganUniv, Jan'18
 - [GCP Big Data & ML Fundamentals](#), Coursera-Google, Apr'21
 - [SQL \(GCP BigQuery\) Fundamentals](#), Kaggle Learn, Feb'22
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Skills

- **Languages**
 - Python, SQL(basics), Markdown, Bash/Shell Scripting
 - **Python Libraries**
 - Pandas, SpaCy, Re (Regular Expressions), Transformers, Sklearn, PyTorch, OpenAI, LangChain
 - **Tools**
 - Git,AWS CLI, Docker, Pipenv (& other Python env management tools), AWS Serverless, OpenAI, ChatGPT, Prompt Engineering
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KEY PROJECTS

Building a Multi-Agent Collaborative (MAC) Chat Application | 2024

- Leading the development of a MAC Chat application that leverages GPT 4o model
 - The chat app integrates with tools and databases to provide intelligent responses to user queries.
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Built a GenAI Platform (X) with a Suite of Applications in AWS | 2024

- Led the development of a unified platform to derive actionable insights from text data
 - Key products:
 - xWorkFlow - Workflow automation tool with a YAML-based prompt engineering system for LLM chaining.
 - xChat - Secure answer engine for customer data interaction
 - xCall Center Solutions – Call center dashboard showcasing metrics from agent-customer interactions via LLM-powered pipelines
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Serverless LLM-powered Classification Application | 2023

- Leveraged OpenAI paid models (such as GPT-4) to perform hierarchical text classification
 - Utilised AWS Lambda functions to throttle the OpenAI API calls at scale
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Contact Center Dashboard - A Speech2Text Dashboard Application in AWS | 2022-23

- Architected a Speech-to-Text dashboard in AWS
 - Powered by open-source ML models for speaker diarization and speech-to-text processing
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BERT Fine-tuned Aspect-based Sentiment Analysis Pipeline | 2020-21

[More Details](#)

- Built a ML Classification Pipeline to convert customer comments into Aspect and Sentiment pairs
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Personally Identifiable Information (PII) Detection using Named Entity Recognition (NER) | 2020-21

[More Details](#)

- Anonymized PII in text data by building a NER system using **RoBerta Fine-tuned Transformer model**
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Learn by Blogging | 25+ Articles | 2020 - Present |

[Blog Link](#)

- Have been passionately learning and writing about coding, data science and ML since 2020 [here](#)
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