# Raajesh N

# **Profile Summary**

Machine Learning AI Engineer skilled in Python, Java, SQL, and neural network fine-tuning (e.g., Tiny-llama). Hands-on experience with LoRA, model optimization, and building real-world AI apps like chat bots and LLM tools. Strong in combining technical skills with a commerce background to create practical, data-driven solutions. Capable of handling end-to-end ML workflows, from training to deployment on platforms like AWS and Colab.

#### Education

# Master of Computer Application (M.C.A.)

June 2023 - Dec 2025

 $SRM\ University$ 

o GPA: 3.9/4.0

o Specialization: Data Science, Data Engineering, Data Warehousing, Machine Learning

## Bachelor of Commerce (B.Com.,)

June 2020 - May 2023

SASTRA Deemed University

o GPA: 7.5/10.0

• Specialization: Direct Taxation, Insurance Law and Business Law

### Experience

#### Intermediate Representative

Chennai, IN

BNY (Bank of New York)

July 2023 - Present

- Reduced processing time from 3 hours to 12 minutes for Contract Reviewer Process using Python.
- Cleaned massive data using SQLite for Competitor Analysis.
- Redesigned report structure (STP) for faster, atomic operations and better isolation.
- o Mastered team processes and contributed 13+ improvement ideas for Client Experience and Work Quality.
- Worked with IDP (Intelligent Document Processing) to extract information from documents.
- Working with AI Agents to automate Client On boarding Processes.

#### **Projects**

Dino AI GitHub ☑

- In this project, hundreds of dinos learn to avoid obstacles (cacti and birds) by evolving their neural networks
  over generations. The AI uses a simple feedforward neural network as its "brain," and the population
  improves through genetic algorithms—mutation, crossover, and selection based on performance.
- o Tools Used: Feedforward Neural Network, Reinforcement Learning, Deep Learning

# TinyLLaMA Fine-Tuning for Python Code Generation

Colab 🗹

- Fine-tuned the TinyLLaMA-1.1B-Chat model using a subset of the codeparrot-clean dataset to improve performance on Python code generation tasks. Implemented LoRA (Low-Rank Adaptation) for efficient parameter tuning on resource-constrained GPUs using peft.
- o Tools Used: PyTorch, PEFT, BitsAndBytes, Accelerate, Colab

#### GPT-2 Architecture Replicate

Colab **∠** 

- Replicated GPT-2 architecture from scratch with custom layers, embeddings, and inference.
- o Tools Used: Transformers, Machine Learning, GPT, LLM

# Certifications

- $\circ$  SIE(Securities Industries Essential) FINRA
- $\circ \ \, \mathbf{Data} \,\, \mathbf{Engineering} \,\, \mathbf{Professional} \,\, \mathbf{Certificate} \mathrm{IBM} \,\, (\mathbf{Coursera})$
- $\circ$  Agile Scrum Master Certification Udemy
- o Google Data Analytics Professional Certificate Google (Coursera)

# **Technologies**

Languages: Python, Java, SQL, JavaScript

Technologies: PEFT, Hugging Face Transformers, TensorFlow, PyTorch, Scikit-learn

# Skills

Skills: Python, SQL, Java, JavaScript, Data Lakes, Data Modeling, AWS (S3, Redshift), Scikit-learn, XGBoost, LightGBM, TensorFlow, PyTorch, Docker, FastAPI, Flask, Hugging Face Transformers, LLMs (GPT, BERT, TinyLLaMA), PEFT (LoRA), BitsAndBytes, OpenCV, CNNs, Transformers.