sachinkalsi15@gmail.com,

+91 9945746470

Data Science Architect with a strong background in deploying advanced **machine learning and deep learning** models at scale. Expertise in **NLP**, **Generative AI**, and leading teams to deliver large-scale data science solutions.

EMPLOYMENT

DRAUP Inc. (Oct 2018- present), Data Science Architect

- Leading a 12-member Data Science team in selecting the right cutting-edge Machine Learning/Deep Learning technologies.
- Collaborated effectively with cross-functional teams (product, big data, research) to address internal, product, and client challenges through Machine Learning.
- Deployed 15+ ML/DL/LLM models in production (AWS ECS) at scale and leveraged Apache Spark and GPUs to tackle large-scale business challenges (AWS EMR).
- Managed the design and development of multiple RAG (Retrieval Augmented Generation) applications at scale, harnessing the power of vector databases, embedding models, and state-of-the-art LLM models.

CALIENT Technologies Inc., (Oct 2017 - Sep 2018), Software Engineer - Machine Learning

• Built Machine Learning models to categorize network device error logs into multiple categories (word2vec + logistic regression) and implemented an alarm system using Java for quick response.

COGOPORT, (Feb 2017 - Sep 2017), Software Developer

• Designed and Developed Bid Request System including **data analytics pipeline** and API development using **Ruby on Rails**.

TECHNICHE e-commerce solutions, (Apr 2015 - Feb 2017), Full Stack Developer

• Proficiently designed and developed multiple **e-commerce websites** using **Node JS (MEAN stack)**, encompassing essential features such as user authentication, authorization, shopping cart functionality, and comprehensive order management

Hewlett-Packard(HP), (Aug 2013 - Dec 2014), Technical Consultant

• Created Java applications for internal use, utilizing extensive SQL expertise for banking project

PROJECTS

- LLM-Powered News Engine: Built a scalable news processing system similar to Google News by developing in-house transformer-based language models
 - ➤ Trained "NEWSoBERTa", a RoBERTa-based transformer language model on 550M tokens, reducing loss by 60% & improving various downstream NLP tasks like classification, NER, semantic embedding, recommendations, etc.
 - > Developed **in-house scalable clustering algorithm** enabling news trend recommendations at scale.
 - > Led a team in training **Mistral-7b** with **LORA** techniques for "relationship extraction" from diverse news articles.
- Scaling Profile Recommendations (~400M profiles): Implemented a semantic similarity search system (91% accurate) using multiple language models and leveraged the Milvus vector database.
 - Utilized multiple language models to embed each profile, harnessed the Milvus vector database to enable large-scale semantic searches & trained a **BERT-based** sentence transformer model to efficiently match profiles.
- Automated Job Responsibility Extraction System: Led the development of an automated system to extract and summarise job responsibilities for professionals.

- Trained and implemented multiple machine learning models to analyze job postings, and developed a Seq2Seq BART model for large-scale responsibility summarisation, removing the need for manual work.
- Utilized data-driven ranking and summarisation to enhance profile context, significantly improving the accuracy of work experience representation for millions of profiles.

Information Retrieval (IR) System for Domain-Specific URLs

- > Designed and implemented a machine learning system utilizing XGBoost and Random Forest algorithms
- > Engineered multiple Machine Learning tools for effective annotation of training data, including the creation of an HTML

Tag Annotator

Skills, Languages & Technologies

- Python, Apache Spark, PyTorch, TensorFlow, HuggingFace 🤗, Scikit-Learn, Keras, Spacy, BetterTransformer,
- Traditional ML, DL & NLP algorithms like Neural Networks, LSTMs, Transformers (BERT, BART, RoBERTa, GPT), etc
- AWS ecosystem: EMR, Sagemaker, ECS, S3, EC2.

Honors & Awards

- 1. **Super Squad Draup,** Mar 2023: Led the Data Science team to win the Super Squad award, highlighting exceptional collective collaborative achievements.
- 2. Employee of the Quarter Draup, Oct 2020

EDUCATION

Bachelor of Engineering (B.E.) in Computer Science (2009 - 2013) - VTU