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**CAREER SUMMARY**

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- Senior Lead Engineer with expertise in Machine Learning compilers, with a focus on TVM, enhancing network performance by optimizing code generation and runtime components.
- Expertise in developing Deep Learning models using architectures such as LSTM/RNN, CNN, Transformers, Autoencoders and LLM's.
- Experience with all major ML algorithms, including KNN, K-means, Naive Bayes, Logistic Regression, SVM, Decision Trees, Random Forest, and GBDT.
- Proficient in leveraging cloud platforms (AWS, GCP) and containerization/orchestration tools like Docker and Kubernetes for scalable ML deployments.

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**EXPERIENCE**

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- **Qualcomm** Bangalore, India  
*Senior Lead Engineer [AI Research]* Mar. 2024 - Present
  - \* Implemented optimized data handling for Adreno GPUs in TVM by adding texture support for OpenCL and Vulkan backends, resulting in a **50%** improvement in network inference times.
  - \* Enhanced TVM capabilities by adding support for new layers and operators to accommodate the latest Large Language Models (LLMs) and Diffusion networks on Adreno GPUs.
  - \* Incorporated memory planner to support and efficiently run large-scale LLMs within constrained memory limits.
- **Imagination Technologies** Pune, India  
*Deep Learning Engineer* Sep. 2021 - Mar. 2024
  - \* Developed an SDK enabling neural network execution on Imagination's GPUs and Neural Network Accelerators (NNAs) using TVM, facilitating efficient model deployment on edge devices.
  - \* Implemented LSTM/RNN support in Imagination's Neural Compute SDK (NCSDK) for models built with PyTorch, TensorFlow, and ONNX, ensuring broader compatibility and accelerated performance.
  - \* Created and optimized graph transforms for diverse operations and operators within RelayIR (TVM), enhancing computational efficiency.
  - \* Contributed to the development of quantization tools (static, dynamic, and QAT) for multiple frameworks, driving improvements in model compression and inference speed.
- **Xpanxion** Pune, India  
*Data Scientist* Jan. 2020 - Sep. 2021
  - \* Developed AI/ML solutions to extract information from medical documents, including document classification and candidate extraction (e.g., benefits, rates, and drug details) using libraries like Fondue, Tesseract, and OpenCV.
  - \* Built reusable AI/ML components within the Innovation Team, including a content-based and collaborative recommendation system, NLP modules such as Named Entity Recognition (NER), QA systems, and sequence translation.
  - \* Led Computer Vision projects involving object localization and detection, image segmentation, and gesture recognition.
- **Siemens R&D** Pune, India  
*Product Development Engineer* Dec. 2018 - Dec 2019
  - \* Developed and enhanced an application for designing manufacturing sequences, with significant contributions to debugging and resolving issues in existing code.
  - \* Accelerated feature deployment by implementing new use-cases and Proof-of-Concepts (POCs), enabling faster shipping of key features.

- **TCS**

*Software Developer*

Pune, India

*Dec 2015 - Nov 2018*

- \* Developed monitoring and control applications for NCRA, including real-time issue monitoring, debugging, and GUI modifications based on client requirements.
- \* Provided support for financial applications such as CRD and SRD for Morgan Stanley, ensuring reliable performance and issue resolution.
- \* Built applications for various clients using Python and C++, contributing to diverse projects and delivering tailored software solutions.

## TECHNICAL SKILLS

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- **Languages:** Python, C++
- **Database:** MySql, MongoDB
- **Data Analysis:** Pandas, Numpy, Matplotlib, Seaborn, openCV
- **ML/DL Toolkit:** Keras, scikit-learn , tensorflow, pytorch, TVM

## CERTIFICATIONS/INTERNSHIP

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- Applied Machine Learning course at Applied AI. ( Jan 2018 to May 2019)
- Completed Stanford Statistical Learning (Self-Paced) course.
- Completed Deep Learning Specialization course from Coursera
- Internship at IARE, Aurangabad on Industrial automation. (May 2014 - Jun 2014)

## EDUCATION

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- **B.Tech** in Electronics and Telecommunication from SGGSIE&T, Nanded with **CGPA 7.7** (2011 - 2015)
- Class XII (HSC), form Maharashtra State Board of Education with **83.33%** (2009 - 2011)
- Class X (SSC), form Maharashtra State Board of Education with **90.92%** (2008 - 2009)