Sakthi Ganesh Mahalingam

+1-(602)-884-7518 | sakthiganesh@asu.edu

1255 E University Dr, Apt H-3016, Tempe, AZ 85281

linkedin.com/in/msakthiganesh/ | github.com/msakthiganesh

EDUCATION

M.S. Computer Science ***Aug 2022 – May 2024***

Arizona State University, Tempe, AZ *GPA: 3.67/4*

B.Tech. Electronics and Communication Engineering ***July 2014 – May 2018***

Vellore Institute of Technology, Vellore, India *GPA: 8.11/10*

PROFESSIONAL EXPERIENCE

Infosys Labs, Infosys Limited – Bengaluru, KA, India ***Aug 2018 – July 2022***

Technology Analyst – Machine Learning *(Recent)*

• Led a team of 3 ML engineers to provide deep learning solutions in NLP and explored domains like Model Explainability and Pretraining language models such as RoBERTa, T5, and GPT-J using PyTorch.

• Performed exploratory data analysis on a large volume of data and developed ML pipelines for several MNCs using the LEAP Platform.

• Represented Infosys in Stanford DAWN Research Program and collaborated with Stanford's HazyResearch team on Snorkel.

SKILLS

Languages and Platforms: Python, SQL, HTML/CSS, Microsoft Azure (AZ-900 Certified), Google Cloud Platform - Vertex AI

Machine Learning and Tools: PyTorch, TensorFlow, HuggingFace Transformers, fast.ai, Flask, Django, Microsoft DeepSpeed (Model and Data Parallelism), Pandas, Numpy, Scikit-learn, OpenCV, Postman, Unix/Linux, Git, GPU VMs

Coursework: Statistical Machine Learning*, Natural Language Processing*, Integrating Robot Learning with Human-Robot Collaboration*, Knowledge Representation & Reasoning*, Image Analytics & Informatics*, Data Structures & Algorithms ***MS**

KEY PROJECTS

Infosys: DAWN: AI Research – SuperGLUE Benchmark **Solution Name: Infosys : Dawn: AI Research**

• Ranked among the top 10 in SuperGLUE (#6 at time of publishing), a rigorous benchmark for NLU tasks, with a score of 86.0.

• Demonstrated the advantages of using a Data-Centric AI approach over a Model-Centric AI approach using a relatively small model (RoBERTa) but still achieving the performance of larger models by converting complex tasks into critical subtasks.

• Utilized the learnings from the Stanford DAWN Research Program and created a model-independent training pipeline (BERT, RoBERTa, ALBERT, DeBERTa, T5) that utilizes the slicing capabilities of Snorkel along with fast.ai ULMFiT.

Infosys Enterprise AI Platform

• Helped architect and develop the Infosys Enterprise AI Platform SDK that provides interoperability between Vertex AI, Azure ML, and Infosys in-house solutions without code changes leading to a 60% increase in completed pipelines during the trial phase.

• The enterprise AI platform aims at providing flexibility for the users to selectively use the services of Vertex AI/ Azure ML or open-source in-house solutions based on their use case, thus reducing the cost of operation.

• Developed a Django project with Swagger for API consumption.

CodeBot – Infosys AI Pair Programmer

• Developed data pipelines to extract, clean, and pre-process Infosys internal GitHub repositories and pre-trained PLBART and T5 models using DeepSpeed (Model and Data Parallelism) for Code Translation, Code Summarization, Code Completion, and Code Generation tasks.

• Deployed the trained models as a Flask application to handle API requests for an Infosys internal VS Code extension to assist developers. The APIs serviced over 30000 responses for the Code Completion task in 3 months.

PUBLICATIONS

• Saichandra Pandraju*, **Sakthi Ganesh Mahalingam***. Answer-Aware Question Generation from Tabular and Textual Data using T5. *International Journal of Emerging Technologies in Learning* (iJET), 16(18), pp. 256-267. 2021. (* Equal Contribution)
DOI: https://doi.org/10.3991/ijet.v16i18.25121 | Scopus | GitHub

• **Sakthi Ganesh Mahalingam**, Saichandra Pandraju. Unsupervised Convolutional Filter Learning for COVID 19 Classification**.** *Revue d'Intelligence Artificielle*, Vol. 35, No. 5, pp. 425-429. 2021.
DOI: https://doi.org/10.18280/ria.350509 | Scopus | GitHub

AWARDS

Insta Award – Center for Emerging Technology Solutions, *Infosys Ltd* **Accelerated Early Career Program,** *Infosys Ltd*

Top 10 Finalist – Microsoft Convergence Hackathon*, Infosys Ltd*