C.S.Bahushruth

Software Engineer

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Skills

Languages	Python, C/C++, Java, Bash, Javascript, Go
Machine Learning	Scikit-learn, Keras, Pytorch, Tensorflow, Fast.ai, Hugging Face, Weights & Biases
Web Development	MongoDB, SQL, Redis, Flask, Fastapi, AWS, Azure, Docker

Experience

Lesan.AI — *Remote*

Research Intern, (Part Time) — *Aug. 2021 - Present*

- Project: **Efficient Machine Translation for Ethiopian Low Resource Languages**
- Working on techniques to train machine translation models efficiently with far lesser parameters on low resource languages like Amharic, Tigrinya, Afaan Oromo and Somali.
- Performing analysis on existing benchmarks for low resource languages like the FLORES dataset.

IBM — *Remote*

Research Intern, (Global Remote Mentoring Program) — *Jul. 2021 - Present*

- Project: **Multi-modal Misinformation Detection**
- Driving the project "Multi-modal Misinformation Detection" where we introduce a new benchmark for identifying multi-modal type of misinformation and a novel approach to address the drawbacks of existing methods to identify misinformation at scale.

Entrepreneur First — *Bengaluru, India*

Founder in Residence — *Feb. 2021 - May. 2021*

- Learned about Financial Modelling, Market sizing, Idea validation, Business planning, Customer Discovery, and other business-related concepts.
- Built a proof of concept solution using Hugging Face and FastAPI to help the K12 students from the Tier 2, 3 communities practice answering subjective questions.
- Our solution showed improvement of 3-5%, 8-12% and upto 25% in performance of students with a baseline of 90%, 80% and 60% respectively.

IBM — *Remote*

Research Intern, (Global Remote Mentoring Program) — *Jul. 2020 - Dec. 2020*

- Project: **Modelling Diffusion and Propagation of Affect in Social Networks**
- Implemented Variational Graph Auto-Encoder and Multimodal Graph + Language models using Pytorch and achieved 5-7% improvement over existing techniques.
- Our work was accepted and presented at the "Deep Learning on Graphs" and "Affective Content Analysis Workshop" at AAAI'21 and accepted at the upcoming "Deep Learning on Graphs" workshop at ACM SIGKDD 2021

Open Source Experience

facebookresearch/mmf

[feat] ALBEF Vision Transformer Encoder #1063 (Merged)

- Added ALBEF Vision Transformer Encoder + Unit Tests.

Projects

Facebook AI challenge - Hateful Memes

- Designed a multi-modal ensemble architecture to predict multi-modal hate using pytorch and achieved an AUROC score of 0.788 placing myteam "MemeLords" in the 7th position on the leader board out of 3000 participants **(Top 1%)**.
- Our final submission had the **7th highest AUC score** and the **2nd highest Accuracy score**.

malnou (Platform to help diagnose kids for severe acute malnutrition)

- Project was shortlisted for the **IBM Call for Code** global semifinals in 2019. Out of the 180,000 developers that participated from 165 different nations, we were selected as one of the global semifinalists.
- Built a low cost affordable IoT device that calculates the health metrics and verifies the identity of the child and stores the health data on Cloudant database. Used IBM's Watson IoT platform to manage IoT devices and the data collected by them.

GPT3 Startup Idea Generator

- Web app that uses Open AI's GPT3 to generate startup ideas based on Input Vertical/Sector and Tech Stack.
- Input prompt to the GPT3 model was extracted from a list of series A startups funded from Nasdaq in 2021.
- Built a web app using Flask and HTML to interact with the Open AI's API.

Converting Legal Texts To Plain Text Using GPT2

- Fine tuned GPT2-Medium to convert unilateral contracts (such as terms of services) to plain simple english texts.
- Dataset used was from the "Plain English Summarization of Contracts" paper submitted to "Proceedings of the Natural Legal Language Processing Workshop 2019".

Selected Achievements and Awards

Facebook AI Hateful memes challenge 7th Position

- My team's submission was in the top 1 percent of the FAIR challenge with the 7th highest AUC score and the 2nd Highest Accuracy score.

Call for Code Global Semifinalists - 2019

- My project "malnou" was shortlisted for the IBM Call for Code global semifinals.

IISC IBM National Hackathon 1st Runner-up - 2018

- I led the team that participated in the national level hackathon conducted by the Indian Institute of Science, sponsored by IBM.

Topcoder Call for Code Hackathon Winners - 2018

- The Call for Code hackathon was also hosted on Topcoder in 2018 and my team won the first place and a cash prize of 5,100 USD.

Link to Academic CV

- Link to Academic CV consisting of additional Research experiences, Publications, Presentations, Peer review and Volunteer work.

Education

Manipal University Jaipur

Jaipur, India

Bachelor of Technology in Computer and Communication Engineering

July, 2017 - July, 2021

- GPA — *8/10*