Vamshi Krishna Bonagiri — Undergrad CS Researcher at Precog

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EXPERIENCE

UNIVERSITY OF MARYLAND BALTIMORE COUNTY | RESEARCH ASSISTANT
May 2023 - Present | Maryland, USA (In Person)

- → **AI Safety Eval:** Working with Dr. Manas Gaur and Dr. PK on developing an **evaluation metric** to assess the safety of Large Language Models.
- → **Adversarial Search**: Worked with Dr. Joseph Reagle and designed a framework that alters the content of a document (preserving meaning) to decrease its rank in retrievers like Google for **Information Disguise**. (**Published, ECIR'23**).

OBSERVE.AI | ML RESEARCH INTERN
August 2022 - November 2022 | Bangalore, India (Remote)

- → **Developed and deployed a new architecture** for **low-resource multilingual text classification** tasks involving **real-world call center data**.

MICROSOFT RESEARCH | COLLABORATOR
July 2022 - Present | Hyderabad, India

- → Worked with Dr. Monojit Choudhury (MSR) and Dr. Manish Shrivastava on creating an acceptability benchmark and a method to **improve generative models for English-Hindi codemix data**. (**Under Review**)

TOKYO INSTITUTE OF TECHNOLOGY | RESEARCH INTERN
August 2021 - January 2022 | Tokyo, Japan (Remote)

- → Worked with Dr. Kazutoshi Sasahara in analyzing unstructured data and make **statistic correlations with real-world impact.** (**Published, CHI'22**).

SMART CITY LIVING LABS | SOFTWARE INTERN
January 2022 - May 2022 | Hyderabad, India

- → Developed an **immersive and interactive 3D dashboard** for **monitoring 300+ IOT Devices** (measuring air/water quality, water flow, etc.) in real-time across a smart city. **[Product Deployed]**
- → Technologies used: **Onem2m, Javascript, ThreeJS, Blender.**

PROJECTS

MUSE (MULTILINGUAL SEMANTIC SEARCH ENGINE) | ML, NLP, PYTORCH, FAISS
- → A vernacular **semantic search engine** to enable **easy search in e-commerce**. Built by augmenting a Sentence-BERT Bi-Encoder to produce domain-oriented results and **FAISS** library for faster search.

ALERT!! THAT'S A MEME STOCK! | GRAPHS, PYTHON, REDDIT API, PANDAS
- → A **2-level alert system** to **predict abnormal surges in stock trading volumes by monitoring** the influence of Reddit discussions on the stock market.
- → Generated valuable insights, discerning quantitative distinctions between "meme" stocks and conventional stocks.

KNOX SHELL | C, LINUX, OPERATING SYSTEMS
- → An **Interactive unix shell** built with **piping support**, I/O redirection, custom commands to monitor system, and uses **signal handling**.

ROOMDASH | MONGODB, EXPRESS, DOCKER, NODEJS, REACTJS
- → A **multi-canteen application** for ordering food using **MERN** stack (both backend and frontend), and containerized using **Docker**.

EDUCATION

IIIT HYDERABAD
B.TECH. IN COMPUTER SCIENCE AND M.S. IN COMPUTATIONAL LINGUISTICS (DUAL DEGREE)
Sept 2020 - Present | Hyd, IN

CGPA: 9.12 (out of 10)

Teaching Assistant: Introduction to NLP during Spring 2023 semester

Coordinator: OSDG or the Open Source Developers Group

PUBLICATIONS

Towards Effective Paraphrasing for Information Disguise
ECIR '23: European Conference on Information Retrieval, 2023

Representation Learning for Identifying Depression Causes in Social Media
ACM SIGKDD '23: Workshop on Knowledge-infused Learning, 2023

Are Deepfakes Concerning? Analyzing Conversations of Deepfakes on Reddit and Exploring Societal Implications
CHI '22: Conference on Human Factors in Computing Systems, 2022

SKILLS

C/C++ • Python • PyTorch • Tensorflow • Javascript • ReactJS • Bash • SQL

ACHIEVEMENTS

Winner, Megathon 2021: Built a Mask Detector that tracks the status of people's masks (on/off) in real-time in crowds (during Covid).

Winner, NASA AMES: Ranked Top 3 **internationally** at the NASA AMES Space Settlement Contest 2017 for developing **Ingress**: A space colony prototype for space colonization

Dean's List Awardee: Selected for Dean's List in all four semesters across academic years 2020-21 and 2021-22.