Arvindh Arun

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Education

- **International Institute of Information Technology, Hyderabad** — Hyderabad
  B.Tech + MS by Research in Computer Science and Engineering — *2019 - Current*
  - Cumulative GPA - 9.07/10
  - Dean's Academic List - 2020-21 M (Top 10%), 2021-22 M (Top 15%), 2022-23 S (Top 5%)
  - Dean's Research List - 2022-23 (Top 5%)
  - Served as a Teaching Assistant for Data & Applications, and Computational Social Science
  - Represented the College Football Team, 5x medals in Track & Field, 3x medals in Inter-house football

Experience

- **Student Collaborator - Google Research** — Bangalore
  InfoNet Team — *January 2024 - Current*
  - Working on leveraging topological information from user interactions to gather insight on the quality of user-generated content for Google Search results re-ranking.

- **Applied AI/ML Intern - JPMorgan Chase** — Bangalore
  Corporate Investment Banking Division — *May 2023 - July 2023*
  - Worked on mining interesting insights from transactional databases for Root Cause Analysis.
  - Utilized streaming frameworks such as PySpark to optimize the workflow.
  - Proposed a new framework utilizing unsupervised GNNs inspired by the CTR prediction domain.
  - Received a Pre-placement Full-time offer for my contributions.

- **Research Intern - The Chinese University of Hong Kong** — Hong Kong
  Mentor: Prof. Hong Cheng — *June 2022 - August 2022*
  - Worked on the domain of Clustering/Community detection in Dynamic social networks and studying their properties.
  - Focused on minimizing the time complexity and the space complexity of the existing real-time solutions.
  - Explored various state-of-the-art solutions and building a visualization tool to study their efficacy.

- **Undergraduate Researcher - Precog Research lab** — Hyderabad
  Mentor: Prof. Ponnurangam Kumaraguru "PK" — *May 2021 - Current*
  - Analyzing social networks and other large networks primarily using their network information.
  - **Georgia Institute of Technology, Atlanta** - Collaboration with Prof. **Polo Chau** on analyzing the Quantitative and Qualitative impact of fraudulent behavior on social networks and their identification.
  - **Adobe Research, Bangalore** - Collaboration with Dr. **Ramasuri Narayanam** on exploring the landscape of group fairness in unsupervised GNNs.
  - **Indiana University, Bloomington** - Collaboration with Prof. **Jisun An** on analyzing the changes to hate speech after the liberalization of social media platforms.

- **Cross Platform Development Intern - Nemocare** — Bangalore
  Flutter and React Native — *January 2021 - May 2021*
  - First prototype of the Android and iOS app for this Google accelerated, Asia Hardware Battle 2019 winning startup led by a Forbes 30 under 30 recipient.

Publications

- **CAFIN: Centrality Aware Fairness inducing IN-processing for Unsupervised Representation Learning on Graphs** (Oral)
  ***Arvindh Arun**, Aakash Aanegola, Amul Agrawal, Ramasuri Narayanam, and Ponnurangam Kumaraguru. 2023.*
  In Proceedings of the 26th European Conference on Artificial Intelligence (ECAI '23), Krakow, Poland.
  Frontiers in Artificial Intelligence and Applications. IOS Press. doi: 10.3233/faia230259 ⬤

- **Erasing Labor with Labor: Dark Patterns and Lockstep Behaviors on the Google Play Store**
  *Ashwin Singh, **Arvindh Arun**, Pulak Malhotra, Pooja Desur, Ayushi Jain, Duen Horng Chau, and Ponnurangam Kumaraguru. 2022.*
  In Proceedings of the 33rd ACM Conference on Hypertext and Social Media (HT '22), Barcelona, Spain.
  Association for Computing Machinery, New York, NY, USA, 186–191.
  Work covered by Montreal AI Ethics Institute.

- **Ensembling Pre-Trained Language Models with Feature Engineering**
  *T. H. Arjun, **Arvindh A.**, and Kumaraguru Ponnurangam. 2021.*
  In Proceedings of the GermEval 2021 Shared Task on the Identification of Toxic, Engaging, and Fact-Claiming Comments, pages 39–46, Duesseldorf, Germany. Association for Computational Linguistics.
  Ranked 6th worldwide on all the three subtasks combined. ⬤

Awards and Honours

TOEFL – 115/120 (30 R, 30L, 27 S, 28 W)	2023
Microsoft Research Travel Grant for ECAI worth $2500	2023
Stellantis NV Hackathon – First Runner-Up, cash prize worth 125,000 INR	2022
Facebook Hackercup – Round 2, Top 10% Globally	2022
GermEval – Ranked 6th Globally on cumulative task rank	2021
PicoCTF by CMU – 102nd place, Top 2% Globally	2020
Google Hashcode – Ranked 457th in India	2020
Howzhack (DreamVu) – 2nd place	2019
UGEE – 20th rank in India, < Top 0.1% in India	2019
JEE – Top 1.9% in India	2019
CBSE Class 12 – 94.8%, Top 1.5% in India	2019
NextGenius Scholarship (University Of The South, Tennessee) – Finalist (withdrew)	2018

Projects

- **Ensemble of Task-Specific Language Models for Brain Encoding [Arxiv]**
  We improve the performance of brain encoders by creating an ensemble model out of 10 popular Language Models (2 syntactic and 8 semantic). We beat the current baselines by 10% on average across all ROIs through our ensembling methods. ⬤

- **Privacy Policy QnA bot**
  Fine-Tuned Jurassic-1 language model on a new dataset consisting of top Indian companies' Privacy Policies for QA and Summarization tasks. Also deployed a Telegram bot for easy access by connecting it with our hosted model. ⬤

- **Spcccesh Shell**
  A shell written in C from scratch having various features like process monitoring, I/O redirection, pipelining and signal handling. ⬤