

Nikitha Srikanth

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EDUCATION

R.V. College of Engineering

B.Tech in Computer Science and Engineering, GPA: 9.27/10

Bangalore, India

Aug 2018-Aug 2022

PUBLICATIONS

1. Contextual Alchemy: A Framework for Enhanced Readability through Cross-Domain Entity Alignment, Poster in **NeurIPS 2023 Workshop on Machine Learning for Creativity and Design**
2. HyHTM: Hyperbolic Geometry-based Hierarchical Topic Model, Findings of the Association for Computational Linguistics: **ACL 2023**
3. Interpretable & Hierarchical Topic Models using Hyperbolic Geometry, 16th Women in Machine Learning **NeurIPS Workshop (WiML 2021)**

PATENTS

1. **P11024-US**: Hierarchical Topic Model With an Interpretable Topic Hierarchy
2. **P12468-US**: Generating Alternative Examples for Content
3. **P11621-US**: Digital Content Analysis
4. **P12149-US**: Generative Artificial Intelligence Powered Response Generation, Validation, and Augmentation

WORK EXPERIENCE

Machine Learning Engineer

Adobe Systems India Pvt. Ltd.

May 2023- Present

Bangalore, India

- Adobe GenStudio
 - * Generated insights for beta customers and built a GenStudio Insights Proof-of-Concept for Adobe Express that reinforced its potential for productization.
 - * Trained multi-lingual models to extract marketing features from textual advertisements for GenStudio Insights
 - * Led intern projects for improving trained model quality and integrating model interpretability features

Machine Learning Research Associate

Adobe Systems India Pvt. Ltd.

July 2022 - May 2023

Noida, India

- Adobe Express
 - * Metadata Asset Search - Developed search suggestions for Adobe Express that enable users to better search for assets in templates
 - * Hashtag and Caption Recommendation for Express Creations - Trained a model using low-rank adaptation and human preference feedback to generate hashtags and captions for Express creations
 - * Patent Granted
- Dynamic Chat
 - * Developed chat summarization pipeline with guardrails for Adobe's enterprise customers chat workflows
 - * Developed a hallucination detection system for summarization which is used across Generative AI products in Adobe
 - * Patent Granted
- Contextual Alchemy
 - * Developed a system with LLMs, web-search, and fact-checking to align and personalise examples in online text content with varied reader interests to make the online reading experience more accessible and relatable.
 - * Poster published at **NeurIPS 2023 Workshop**

Research Intern

Adobe Systems India Pvt. Ltd.

Jan 2022 - July 2022

Remote, India

- Research on understanding user intent in enterprise search systems through clarification questions and search suggestions.
- Developed a solution that quantifies desirable properties of search queries to provide quality search suggestions for enterprise search systems without sufficient user logs.

Research Intern

May 2021 - July 2021

Adobe Systems India Pvt. Ltd.

Remote, India

- Research on embedding hierarchical information in hyperbolic space for content recommendation.
- Trained hierarchical topic models that beat state-of-the-art solutions in terms of coherence, diversity, and granularity
- Developed a method for topic labeling using embeddings in hyperbolic space
- Published at [ACL 2023](#) and [NeurIPS 2021](#)
- Patent Published

Research Intern

Aug 2020 - May 2021

Indian Space Research Organization (ISRO)

Remote, India

- Developing an end-to-end deep learning framework for multi-spectral satellite image semantic segmentation and synthetic dataset generation for several image classes.
- Implemented an unsupervised approach with CNNs and super-pixel clustering of images with an 82% accuracy on Multi-label Classification.
- Developed a scalable Conditional Generative Adversarial Network (GAN) using threshold-based training seeds, significantly lowering training sample creation and generation costs.

UNDERGRAD PROJECTS

Interpretable Question Answering for Privacy Policies. | *Python, Tensorflow* Feb 2021 – May 2021

- Developed a Question Answering system for Privacy Policies using Deep Learning.
- Optional analysis of output through interpretability methods including saliency maps and perturbation analysis

Analysing the Impact of COVID-19 on Food Security | *Python, Tensorflow* June 2020 – Aug. 2020

- Declared Winners out of 4000 teams and 10,000 students at [IBM Hack Challenge 2020](#), one of India's largest hackathons.
- Using data from household surveys, grocery store mobility, and daily COVID-19 cases to identify and visualise the most vulnerable population clusters for food security measures.

News Media Bias Detection System | *Python, PyTorch, Flask* Oct. 2020 – Nov. 2020

- Developed a fine-tuned BERT model for multi-classification of political bias on news articles, resulting in an F1 score of 0.972.
- Provided secondary features such as summarising articles, article metadata, and subjectivity and polarity of the article.

Detecting COVID-19 onset from Wearables | *Python, PyTorch* Oct. 2020 – Nov. 2020

- Trained LSTMs on publicly available wearables data for binary classification (Covid or not) with 87% test accuracy
- Used LIME to identify early heart rate variability markers that are important for the model to detect Covid-19

Deep Traffic Analysis (in collaboration with DRDO) | *Python, PyTorch* Oct. 2020 – Nov. 2020

- Parsing network packets to extract certificate information
- Simulated and parsed DNS over HTTPS (DoH) packets from network traffic to be used as a dataset for training a time-series model for DoH packet detection and differentiating between malicious and benign DoH

HONORS AND AWARDS

- **Finalist** - [Adobe MAX Sneaks 2022](#)
- **Winner** - [IBM Hack Challenge 2020](#)
- **Winner** - [Ada Lovelace Day Celebrations Hackathon 2020](#) by IEEE and IBM India
- **Winner** - [GirlGeeks Hackathon 2019](#) by PES University in association with Microsoft India and IEEE Computer Society, Bangalore

TEAM AND VOLUNTEER EXPERIENCE

Core Team Member, R.V. QuizCorp <i>Create and organize quizzes for National-Level quiz tournaments</i>	Bangalore, India <i>July 2018 - August 2022</i>
Co-Founder IEEE RVCE Projects Team <i>Matching students with mentors and interdisciplinary projects for research exposure</i>	Bangalore, India <i>April 2021 - April 2022</i>
Curriculum Content Developer at Gyanada Foundation <i>Developed an introduction to programming curriculum for underprivileged children</i>	Remote <i>March 2021 - April 2021</i>
Fundraising Executive at S.P.A.R.K <i>Organized a fundraising campaign for Rs. 2 million for orphanages affected by the pandemic</i>	Bangalore, India <i>Jan 2020 - March 2021</i>
Machine Learning Core Team Member, Coding Club RVCE <i>Organize hackathons, workshops, placement training support</i>	Bangalore, India <i>Aug 2019 - August 2020</i>
Co-Founder and Secretary IEEE Computer Society RVCE Student Chapter <i>Invite domain experts for hands-on workshops, and research collaboration</i>	Bangalore, India <i>Aug 2019 - Dec 2020</i>
Volunteer Akshara Programme by Rotaract RVCE <i>Teaching English to under-resourced Kannada-medium schools</i>	Bangalore, India <i>Feb 2019</i>

HOBBIES AND INTERESTS

Podcasting <i>LiteRarely: Books (emphasis on Indian literature); CultuRarely Speaking: pop-culture</i>	Remote <i>April 2024-Present</i>
Writing <i>Thought Schedule: A collection of short stories, poems, and some thoughts</i>	Bangalore, India <i>May 2020- Present</i>