# JITIN KRISHNAN

**Email**: jktaliyil@gmail.com ♦ **Webpage**: https://jitinkrishnan.github.io ♦ **LinkedIn**: www.linkedin.com/in/jitinkrishnan
♦ **Publications**: https://jitinkrishnan.github.io/publications/

**AREAS OF INTEREST:** Deep Learning, NLP, Multimodal and Multilingual Understanding, Generative AI, Graph Neural Nets.

## EDUCATION

**George Mason University,** Fairfax, VA
Ph.D. in Computer Science                                                                                                    May 2021

**University of Virginia,** Charlottesville, VA
B.S. in Computer Science, Minor in Economics                                                            December 2012

## WORK EXPERIENCE

### Meta Platforms, Inc. - Seattle, WA

Research Scientist ♦ Generative AI (current) ♦ Modern Recommender Systems ♦ AI Integrity        Nov 2021 – Present

- **End-to-End ML:** Currently working in a team that builds E2E Generative AI solutions for conversational commerce. In 2023, I worked in a fast-paced applied AI research team that developed cutting-edge ML solutions for mainstream ranking and recommendation surfaces such as FB/IG feed, reels, etc. Led a Cross-Domain Multimodal Multi-task workstream to holistically serve these surfaces. This includes all aspects of E2E ML from data generation and modelling to pushing the model in production with A/B testing. Leadership skills include workstream brainstorming, identifying opportunities, collaboration with cross-functional teams, assigning tasks, holding weekly meetings to monitor progress, and eventually creating launch proposals and conducting necessary evaluations.
- **Research**: Latest publication - https://arxiv.org/pdf/2302.02060.pdf (Accepted at ICLR 2024).

PhD Intern                                                                                    Summer 2019, Summer 2020

- Dangerous Content ML - NLP and Graph Neural Networks
  - **Graph Isomorphism Network / Graph Attention Network:** Performed comprehensive research and experiments on Graph Neural Networks and applied it to construct an end-to-end machine learning pipeline to identify terrorism violating actors using neighborhood aggregation to improve node embeddings.
- Business Integrity ML - Computer Vision
  - **Convolutional Neural Nets:** Performed comprehensive research and experiments on Neural Style Transfer and built an end-to-end pipeline for robust shape-based ResNet-50 classifiers particularly addressing adversarial images.
  - Research was motivated from the work by Geirhos et al who showed the texture-biased nature of existing image classifiers.

### George Mason University - Fairfax, VA

PhD Student/Research Assistant ♦ Computer Science Faculty ♦ Machine Learning/NLP        Fall 2013 – Spring 2021

- **Unsupervised Cross-Domain and Cross-Lingual Problems in Text:** Focused mainly on advancing the state-of-the-art subjective text classification problems under domain shift or language shift. Examples include learning from past crisis events to evaluate an ongoing crisis or transferring knowledge from one language to another; thus improving the generalizability of machine learning/language models. Architecturally, explored many aspects of Deep Learning which includes BiLSTM, Word Vectors, Attention mechanisms, and Transformer-based models such as T5, BERT, and XLM-R; that are then used to study Multi-Task Learning, Cross-Domain/Cross-Lingual Sentiment Classification, Slot-filling, Code-Switching, Transliteration, and Question-Answering problems. **Publications/Code**: Visit https://jitinkrishnan.github.io/publications/
- **Teaching:** https://jitinkrishnan.github.io/teaching/ (Intro to Programming, OOP, Data Structures – in Java and Python).

### Amazon.com, Inc. - Seattle, WA

Applied Scientist Intern ♦ Alexa NLU                                                                      Summer 2021

- Performed research and experiments on the joint tasks of Intent Prediction and Slot Filling for various Alexa Skills. This included implementing and adopting the research paper "Self-Training with Weak Supervision" by Karamanolakis et al. (2021) to Alexa skills. This work utilizes weak labels and unlabeled data to iteratively train a Teacher-Student framework.

### NASA Goddard Space Flight Center - Greenbelt, MD

Intern ♦ AI Research                                                                             Summer 2015 - 2018

- **Systems Engineer's Virtual Assistant (SEVA):** An explainable virtual assistant designed to help NASA's Systems Engineers in their daily work and aid them in information retrieval, question-answering, preserving lesson learned, common-sense reasoning, etc. **Publications/Code:** https://github.com/jitinkrishnan/NASA-SE

**Languages/Tools** - PyTorch, TensorFlow, Keras, Python, Java, Octave, C, C++, MIPS assembly, Matlab, Lisp, Prolog
**Award -** John Mather Nobel Scholar (NASA GSFC, July 2017)