Varun Iyer

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EDUCATION

University of Illinois at Chicago **Aug 2022 – Present**
Doctor of Philosophy in Computer Science

Johns Hopkins University **Aug 2020 – May 2022**
Master of Science in Engineering - Computer Science *GPA: 3.5/4.0*

University of Massachusetts Amherst **Aug 2017 – May 2020**
Bachelor of Science in Computer Science *GPA: 3.7/4.0*
Honors College Scholar with Great Distinction

EXPERIENCE

Amazon **May 2021 – Dec 2021**
Applied Scientist Intern

- ▷ Worked with **Dr. Anoop Kumar** on unsupervised paraphrase-based data augmentation
- ▷ Leveraged Abstract Meaning Representations (AMRs) to generate syntactically diverse paraphrases
- ▷ Achieved SOTA performance on unsupervised paraphrase generation task on multiple datasets

Johns Hopkins University **May 2020 – Dec 2021**
Research Assistant

- ▷ Worked with **Professor Benjamin van Durme** on semantically grounded image classification
- ▷ Improved ResNet architecture for few-shot learning with geometric hierarchical embeddings
- ▷ Extended neural entity typing pipeline to new datasets in a distributed training setting

University of Massachusetts Amherst **Aug 2018 – May 2020**
Undergraduate Research Assistant

- ▷ Worked with **Professor Andrew McCallum** on fine-grained entity typing using PyTorch
- ▷ Developed a stacked BiLSTM with embedding-based loss functions and hierarchical type constraints
- ▷ Record-linked datasets including Amazon-GoogleProducts using a compound LSTM + CNN model

University of Massachusetts Amherst **Aug 2018 – May 2020**
Undergraduate Course Assistant

- ▷ Graded theory-intensive problem sets and exams in Artificial Intelligence and Algorithms
- ▷ Helped students in Computer Systems complete programming assignments written in C and assembly

University of Southern California **May 2019 – Aug 2019**
Visiting Undergraduate Researcher

- ▷ Worked with **Professor Xiang Ren** on reinforcement learning-based knowledge graph (KG) reasoning
- ▷ Formulated contextual text-structure embedding to augment inference paths with with non-KG entities
- ▷ Trained a PCNN with attention to perform distantly supervised relation extraction on inference paths

Information Sciences Institute **May 2018 – Aug 2018**
Undergraduate Research Intern

- ▷ Worked with **Professor Craig Knoblock** to build and link entities in a KG of space-related objects
- ▷ Implemented level-based access control for data across multiple Elasticsearch indices
- ▷ Extracted information on 1000s of satellites and incorporated data into Elastic workflow

COURSEWORK

Graduate	**Undergraduate**
Deep Learning	Natural Language Processing
Human Language Technology	Machine Learning
Information Retrieval	Artificial Intelligence
Parallel Programming	Linear Algebra
Semantics	Multivariate Calculus

SKILLS

Programming Languages	Python, Java, C++, C, JavaScript
Libraries & Frameworks	PyTorch, NumPy, Sci-kit Learn, SciPy, LaTeX