VIVEK IYER

IRE Researcher @ IIIT-H | IBM Research | Google Summer of Code 2018

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RESEARCH EXPERIENCE

IRE Researcher

Software Engineering Research Centre, IIIT-H

📅 August 2018 – Present   📍 Hyderabad, India

- **Ontology Enrichment from Text**: A **Deep Learning** solution to **enrich ontologies** from text. A **Bidirectional LSTM** is used to semantically understand sentence structure in order to extract relevant **concepts** and **relationships** from structured & unstructured text.
- **Ontology Evaluator**: An ontology quality evaluation tool that uses **Machine Learning** (Support Vector regression) to score and rank ontologies by syntactic and semantic quality
- **Ontology Visualization & Validation**: Crowdsourced ontology visualization and validation tool by using ontologist's **Twitter credibility** as quality control

INTERNSHIPS

NLP Research Intern

IBM Research

📅 May 2020 - Present   📍 Remote

- Currently working on developing a Deep-Learning based solution to solve the problem of **Ontology Alignment** in an effort to beat AML, the state-of-the-art that uses rule-based techniques.
- The focus is on detection of simple equivalence relationships, therefore we are currently working on incorporating **graph attention-based algorithms** to detect equivalence by exploiting both **syntactic** and **semantic** structure of ontologies

GSoC Developer @ XWiki

Google Summer of Code

📅 May 2018 - August 2018   📍 Remote

- Added language support for **Velocity Template Language** to **Google Blockly**. Also created a new Blockly toolbox to generate **Velocity code** for common XWiki scripting actions in **SPARQL** & **XWQL**
- **Interfaced remotely** with a team based out of France to **develop, package** and **ship** the Blockly toolbox as a ready-to-use XWiki extension

Applied NLP Research Intern

ZingHR

📅 June 2017 – August 2017   📍 Mumbai, India

- Engineered, developed and packaged a resume parser which used various **applied NLP techniques** to **recognize** different sections of the resume and **extract** various professional & educational fields.
- Coordinated with a large number of team members and interfaced extensively with Microsoft as part of a joint venture to develop the **resume parser**

EDUCATION

B.Tech. + MS by Research in CSE

IIIT Hyderabad

📅 2016 - Present   📍 Hyderabad, India

Currently enrolled in a dual degree B.Tech + MS by Research (IRE) course at IIIT-H
Expected Graduation Year: 2021

RESEARCH INTERESTS

Ontologies   Knowledge Graphs   IRE
Deep Learning   Machine Learning
Semantic Web   Text Mining   NLP

COURSE PROJECTS

Enrichment of Wikidata KG   [Python]

- Enrichment of Wikidata by **merging triples** from other popular KGs like **DBPedia, Freebase, BabelNet, Google KG** etc.
- Incorporates **entity** and **relation resolution** to resolve raw RDF triples to Wikidata entities with the help of **USE embeddings**

FAQ Chatbot   [Python]

- An FAQ **chatbot** built using the **Encoder-Decoder with Luong Attention** model and trained on the Microsoft Frames dataset.
- Won **first prize** at the IIIT-H **Walmart Hackathon** 2019.

Wikipedia Search   [Python]

- A mini **search engine** that allows the user to search for articles on **Wikipedia**.

TECH SKILLS

C   C++   C#   Python   JS   Flask
Dynet   Tensorflow   MXNet   Keras
Pytorch   Numpy   Sklearn   NLTK

RELEVANT COURSES

Artificial Intelligence   NLP Applications
Statistical Methods in AI   IRE   NLP
Social Computing   Deep Learning
Linear Algebra   Multivariate Analysis