Akshay Parekh

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My research work centers around Natural Language Processing, Information Extraction & Deep Learning, mainly focusing on Large-scale Relation Extraction.

EDUCATION

- **Indian Institute of Technology Guwahati** — Guwahati, India
  PhD, Thesis Topic: Large Scale Relation Extraction, Advisors: Dr. Ashish Anand & Dr. Amit Awekar — *July. 2016 –*

- **Center for Development in Advanced Computing (CDAC)** — Hyderabad, India
  Diploma in System Software Development(DSSD); CGPA: 73.25% (Batch Topper) — *Feb 2014 – Aug 2014*

- **G. H. Raisoni College of Engineering** — Nagpur, India
  Bachelor of Engineering in Computer Science & Enineering; CGPA: 72.40% — *July 2009 – May 2013*

PUBLICATIONS

Conference

- **Taxonomical hierarchy of canonicalized relations from multiple Knowledge Bases.**
  Akshay Parekh, *Ashish Anand, Amit Awekar* — *CoDS-COMAD 2020*

arXiv

- **A Neural Architecture for Person Ontology population.**
  Balaji Ganesan, Riddhiman Dasgupta, **Akshay Parekh**, *Hima Patel, Berthold Reinwald* — *arXiv:2001.08013*

ACADEMIC EXPERIENCE

- **Indian Institute of Technology** — Guwahati, India
  Research Scholar — *July 2016 –*
  - **CS 110 Programming Language Lab**: Teaching Assistant
  - **CS 210 Data Structure Lab**: Teaching Assistant
  - **CS 565 Intelligent System and Interfaces**: Teaching Assistant
  - **CS 242 System Programming Lab**: Teaching Assistant
  - **CS 595 Data Visualization Lab**: Teaching Assistant
  - **CS 203/204 Data Structure and Algorithms**: Teaching Assistant

INDUSTRY EXPERIENCE

- **IBM Research Labs** — Bangalore, India
  Research Intern — *May 2019 - Aug 2019*
  - **Relation Extraction for Ontology Learning**: Relation Extraction, NLP, DL & Ontology Graphs

STARTUP EXPERIENCE

- **Digitales Communications Pvt. Ltd.(Startup)** — Mumbai, India
  Software Engineer — *Jan 2015 - June 2015*
  - **Shopista**: Web Scraping, Information Extraction & Android UI Designer

Projects

- **Relation Extraction for Ontology Creation**: Internship project at IBM Reasearch Labs, Bangalore. In this project, we developed an end-to-end model to extract relations between real-world entities from texts for ontology creation. We based our model on On2vec and used TACRED and other industry datasets for evaluation.
- **Generating Knowledge Graph from Wikipedia Infobox**: This is part of my initial work for my PhD thesis work. In this project, I extract all the infobox from the Wikipedia xml dump. Categorize infobox template types in Person, Organization, and Location. Parse all the infobox that falls into one of the category. Also generate list of relations for each of the 3 types. Finally, extract information in the form of triple (e1, r, e2)
- **Packet Filtering Firewall for Linux Kernel**: Course project for DSSD, developed in C/C++ using iptables, netfileters and Linux Kernel module.

Talks

- **Workshop: AI in Healthcare 2019, IIT Guwahati**: Hands-on session on Deep Learning
- **RSF, EEE, IIT Guwahati (16 November 2019), IIT Guwahati**: Hands-on Session on Python for Machine Learning.
- **TEQIP: DL for NLP, IIT Guwahati (19 November 2019)**: Hands-on Session on Introduction to Tensorflow==1.x.
- **Management Development Programme on AI in its possible implementation in Indian context, IIT Guwahati (20 November 2019)**: Hands-on Session on Introduction to Python for Data Analysis and Text Processing.

Technical Skills

- **Languages**: Python, C, C++
- **Web-Technologies**: HTML, CSS
- **Data Analysis and Visualization**: Numpy, Pandas, Matplotlib, Seaborn
- **ML-DL**: Scikit-learn, Tensorflow, PyTorch
- **NLP**: NLTK, spacy
- **Operating System**: Windows, Linux(Ubuntu)
- **Tools**: Ipython, Jupyter, Latex

Key Courses

- **IITG CS512**: Design & Analysis of Algorithms
- **IITG CS570**: Fundamentals of Information Retrieval
- **IITG CS565**: Intelligent Systems & Interfaces
- **IITG CS561**: Artificial Intelligence
- **CDAC DSSD**: Linux System Programming
- **CDAC DSSD**: Linux Kernel Programming

Achievements

- **Persistent Systems Pvt. Ltd., SemiColon 2012, Hackathon**: Winner