RAJARSHI BHOWMIK

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EMPLOYMENT

Bloomberg L.P., New York *May 2021 – Present*
AI Research Engineer

EDUCATION

Rutgers University–New Brunswick, New Jersey, USA *August 2015 – April 2021*
Ph.D., Computer Science
Dissertation Title: Neural Methods for Entity-Centric Knowledge Extraction and Reasoning in Natural Language
Advisor: Dr. Gerard de Melo

National Institute of Technology Karnataka, Surathkal, India *July 2012 – June 2014*
Master of Technology, Systems Analysis and Computer Applications

West Bengal University of Technology, Kolkata, India *August 2007 – June 2011*
Bachelor of Technology, Computer Science and Engineering

RESEARCH EXPERIENCE

Bloomberg L.P., New York *Summer 2020*
Research Intern

Department of Computer Science, Rutgers University *August 2018 – May 2020*
Graduate Research Assistant

Nokia Bell Labs, Murray Hill, New Jersey *Summer 2018 and 2017*
Research Intern

Dell India R&D, Bangalore *August 2013 – June 2014*
Research Intern

RESEARCH AREAS

- Information extraction from text, structured and unstructured text data analysis
- Knowledge graph reasoning, graph representation learning
- Explainable question answering over knowledge graphs using deep reinforcement learning
- Information retrieval for entity-centric search queries
- Fact-allegiant natural language generation
- Affective text generation from multi-modal data

PUBLICATIONS

- **Conference Papers**

- **Learning Rich Representation of Keyphrases from Text.**
  Mayank Kulkarni, Debanjan Mahata, Ravneet Arora, Rajarshi Bhowmik. In Findings of NAACL, 2022.
- **Explainable Link Prediction for Emerging Entities in Knowledge Graphs.**
  Rajarshi Bhowmik and Gerard de Melo. In Proceedings of ISWC, 2020.
- **Facts That Matter: Dynamic Fact Retrieval for Entity-Centric Search Queries.**
  Atharva Paranjpe, Rajarshi Bhowmik, and Gerard de Melo. In Proceedings of ISWC, 2020. (Poster and Demo Track)
- **Be Concise and Precise: Synthesizing Open-domain Entity Descriptions from Facts.**
  Rajarshi Bhowmik and Gerard de Melo. In Proceedings of The Web Conference, 2019.
- **Domain-Independent Automated Processing of Free-Form Text Data in Telecom.**
  Rajarshi Bhowmik and Ahmet Akyamac. In Proceedings of IEEE ICDE, 2019.
- **Generating Fine-Grained Open Vocabulary Entity Type Descriptions.**
  Rajarshi Bhowmik and Gerard de Melo. In Proceedings of ACL, 2018.

- **Workshop Papers**
  - **Fast and Effective Biomedical Entity Linking Using a Dual Encoder.**
    Rajarshi Bhowmik, Karl Stratos, and Gerard de Melo. In Proceedings of the 12th International Workshop on Health Text Mining and Information Analysis (LOUHI), EACL 2021.
  - **Exploiting Image–Text Synergy for Contextual Image Captioning.**
    Sreyasi Nag Chowdhury, Rajarshi Bhowmik, Hareesh Ravi, Gerard de Melo, Simon Razniewski, and Gerhard Weikum. In Proceedings of the 3rd Workshop on Beyond Vision and Language: Integrating Real World Knowledge (LANTERN), EACL 2021.
- **Patents**
  - **Determination of Field Types in Tabular Data.**
    Ahmet Akyamac, Rajarshi Bhowmik, and Jeongran Lee. US Patent Number 10817657.
  - **Domain-Independent Automated Processing of Free-Form Text.**
    Rajarshi Bhowmik and Ahmet Akyamac. US Patent Application PCT/US2017/068911, filed 2017.

TEACHING EXPERIENCE

Department of Computer Science, Rutgers University *August 2015 – May 2018*
Teaching Assistant *August 2020 – Present*
Courses

- Principles of Information and Database Management (Fall 2015, Summer 2016, Spring 2017, Fall 2020, Spring 2021)
- Database Systems (Spring 2018)
- Massive Data Storage and Retrieval (Fall 2017)
- Design and Analysis of Computer Algorithms (Spring 2016, Fall 2016)

National Institute of Technology Karnataka, Surathkal *July 2014 – May 2015*
Assistant Lecturer
Courses

- Data Mining (Fall 2014)

- Principles of Object Oriented Programming (Spring 2015)

AWARDS AND HONORS

- Patent Application Award, Nokia Bell Labs, 2018
- Institute Gold Medal for securing highest GPA in M. Tech., 2014

GRANTS AND FELLOWSHIPS

- Student Grant, ISWC 2020
- Diffbot Research Grant, 2019
- Scholarship from the Ministry of Human Resource Development, Govt. of India (2012–2014)
- Annual scholarship from the Govt. of West Bengal, India (2007–2011)
- Annual scholarship from Foundation for Excellence (2007–2011)

PROFESSIONAL SERVICES

- **Conference Program Committee Member**
  2022: AAAI, CIKM, NAACL-HLT, ACL, EMNLP, ARR
  2021: AAAI, NAACL-HLT, ACL-IJCNLP, CIKM, EMNLP, AKBC, ARR
  2020: CIKM
  2018: MASC-SLL
- **Workshop Program Committee Member**
  2021: SustaiNLP (co-located with EMNLP 2021)
- **Journal Reviewer**
  Computational Intelligence, Wiley, 2019–2020

PROFESSIONAL AFFILIATIONS

ACL, ACM, IEEE