Md Rizwan Parvez

https://sites.google.com/site/parvezmdrizwan/
https://www.linkedin.com/in/rizwanparvez/

Email : rizwan@ucla.edu
https://github.com/rizwan09/
Mobile : +1-434-249-4876

EDUCATION

- **University of California, Los Angeles (UCLA)** — Los Angeles, CA
PhD in Computer Science — Aug. 2016 – July. 2022 (exp)
Natural Language Processing Group; w/ Kai-Wei Chang
- **Bangladesh University of Engineering and Technology (BUET)** — Dhaka, Bangladesh
Bachelor of Science in Computer Science and Engineering; *GPA:* 3.80; *Rank:* 15/134 — May. 2010 – Sep. 2015

RESEARCH EXPERIENCE

Google Research — Remote, CA
Research Intern (Summer), Mentor: Bin Zhang and Raghav Gupta — *June, 2021 - Sep, 2021*
- **Retrieval Augmented Response Dialogue Generation**:
  - Developed a modular framework to (i) construct a template dialogue response from a natural utterance (ii) given a large pool of templates, retrieve the top-k candidates (iii) using them individually, generate the final responses that are diverse from each other and simulate real user's diversity behavior.
  - Output: Significantly reduced the self-bleu score of the generated responses by 5 points.

Facebook AI Research (FAIR) — Remote, Seattle, WA
Research Intern (Summer), Mentor: Scott Wen-tau Yih — *June, 2020 - Sep, 2020*
- **Open-domain Question Answering**:
  - Developed a training efficient dense passage retrieval for open-domain QA.
  - Outcome: On Google Natural Questions, Retriever acc. top-20/100: 83.6/86.81; with just top-20, e2e EM: 49.44.

Salesforce Research — Palo Alto, CA
Research Intern (Summer), Mentor: Bryan McCann — *June, 2019 - Sep, 2019*
- **Unsupervised Question Answering**:
  - Building unsupervised QA dataset that filters noisy data and contains human-like questions.
  - Outcome: Improved the state-of-art *unsupervised* F1 score by 2% on SQuAD development dataset.

Microsoft — Redmond, WA
Research Intern (Summer), Mentor: Paul Mineiro — *June, 2018 - Sep, 2018*
- **Language Models in Hyperbolic Space**:
  - Developed a language model by learning representation in hyperbolic space.
  - Outcome: Outperforms ELMO (Euclidean) with a lower perplexity of 4 on a subset of 1 billion benchmark dataset.

NLP group at UCLA — Los Angeles, CA
Phd Candidate — *Aug. 2017 - present*
- **Ongoing Projects**:
  - Structure Oriented Dense Retrieval.
  - A Mixture Model to Enhance Text-to-code and Code-to-code Generation by Their Joint Training.
  - Improving Code Translation by Leveraging Code Generation using an Unsupervised Language Translation Method.
  - A Survey on Data Augmentation for Code Automation

SELECTED PREVIOUS PUBLICATIONS

[1] **Md R. Parvez**, W. Ahamd, S. Chakraborty, B. Ray, Kai-Wei Chang, Retrieval Augmented Code Generaton and Summarization, **EMNLP Findings, 2021**

[2] **Md R. Parvez**, Kai-Wei Chang, Evaluating the Values of Sources in Transfer Learning, **NAACL, 2021**

[3] **Md R. Parvez**, T. Bolukbashi, Kai-Wei Chang, V. Saligrama, Robust Text Classification on Test-time Budget, **EMNLP, 2019**

[4] **Md R. Parvez**, S. Chakraborty, B. Ray, and Kai-Wei Chang, Building Language Models for Text with Named Entities, **ACL, 2018**

[5] **Md R. Parvez**, T. Mosharraf, and M. E. Ali, A Novel Approach to Identify Spatio-Temporal Crime Pattern in Dhaka City, *ICTD, 2016*

PROGRAMMING SKILLS

Python, Tensorflow, Pytorch