XIANGYU (BECKY) PENG

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Research area: Natural Language Generation, Reinforcement Learning,
Knowledge Graph, Game AI, Deep Learning

EDUCATION

Georgia Institute of Technology, Atlanta, Georgia   *Aug 2019 - present*
PhD in Machine Learning, GPA: 4.00/4.00, Advisor: Dr. Mark O. Riedl
Relevant Coursework: Reinforcement Learning; Stochastic Process; Math foundation of Machine Learning;
Non-linear Optimization; Advanced Algorithm; Natural Language Processing; Theoretical Statistics

Stanford University, Stanford, California   *Sep 2017 - Jun 2019*
M.S. in Structure Engineering, GPA: 4.00/4.30, Advisor: Dr. Jack Baker
Relevant Coursework: Deep Learning; Convolutional Neural Networks for Visual Recognition; Machine
Learning; Data Mining and Analysis; Mining Massive Data Sets

Shanghai Jiaotong University, Shanghai, China   *Sep 2013 - Jun 2017*
B.S. in Civil Engineering, GPA: 3.95/4.00, Advisor: Dr. Lulu Zhang
Relevant Coursework: Data structure; Programming Abstractions in C++

PUBLICATIONS

Augmented Neural Story Generation with Commonsense Inference [arxiv]
Peng, X., Li, S., Wiegreffe, S. and Riedl, M.
The 3rd Workshop On Narrative Understanding in NAACL-21
Submitted to the 36th AAAI Conference on Artificial Intelligence (AAAI-22)

Explainable Reinforcement Learning Agent with Stacked Hierarchical Attention
Peng, X., Ammanabrolu P., and Riedl, M.
Explainable Graph-Based Machine Learning Workshop in AKBC-21

Detecting and Adapting to Novelty in Games [arxiv]
Peng, X., Balloch, J., and Riedl, M.
Reinforcement Learning in Games workshop at AAAI 2021
Creativity and Robotics workshop at ICSR 2020

Automatic Story Generation: Challenges and Attempts. [arxiv]
Alabdulkarim A., Li S., **Peng, X.**
The 3rd Workshop On Narrative Understanding in NAACL-21

Reducing Non-Normative Text Generation from Language Models [arxiv]
Peng, X., Li, S., Frazier, S. and Riedl, M.
The 13th International Conference on Natural Language Generation (INLG 2020)

Improving Neural Storytelling with Commonsense Inferences
Peng, X., Li, S., Wiegreffe, S.
Poster Presentation. WiML workshop on NeurIPS-20

WORK EXPERIENCE

PhD Data scientist   May 2021 - Aug 2021
Einstein commerce cloud team in Salesforce   Boston, MA

· Proposing Extract-Boost-Finetune (EBF) – a method for improving automatic product description generation (Patent approved)
· Extracting product attributes from images with ResNet50
· Boosting the probability of tokens with high similarity with extracted features
· Language model is fine-tuned with reinforcement learning to generate better descriptions

Graduate Research Assistant   Aug 2019 - Present
Human-Centered Artificial Intelligence And Entertainment Intelligence Lab   Atlanta, Georgia

· Current project: Reader models in story generation
· Current project: Explaining reinforcement learning agents' behavior with natural language
· Previous project: Reducing Non-Normative Text Generation from Language Models
· Previous project: Improvisational Reinforcement Learning In Open Worlds
· Previous project: Generating common sense stories between multiple characters

Data Scientist Intern   Jun 2018 - Sep 2018
SunPower Corp.   San Jose, California

· Exploring feature extraction of 1-second hot-spot cell test by conducting correlation analysis
· Finding effective data representations and evaluation metrics for training neural networks of predicting hot-spot max temperature
· Implementing automatic data recording and correlation analysis interface with python

Research Assistant   Jun 2014 - Jun 2017
State Key Laboratory of Ocean Engineering of China   Shanghai, China

· Exploring soil properties relationship in heterogeneous seabed and liquefaction depths under pressure
· Developing a stochastic finite element model in MATLAB to integrat multiple spatially random soil property
· Investigating the effects of negatively cross-correlated spatially random soil properties with data mining

SKILLS

Technical: Natural Language Processing, Reinforcement Learning, Machine Learning, Knowledge Graphs, Predictive Analytics, Computer Vison

Programming: C/C++, Python, R, SQL, MATLAB, Julia

Tools and Framework: Pytorch, Tensorflow, Git, scikit-learn, Numpy, Pandas, nltk

AWARDS

NeurIPS Women in Machine Learning Workshop Travel Grant   *Dec 2020*

Stewart Fellowship, Georgia Institute of Technology   *Aug 2019*

Outstanding Graduates of Class 2017, Shanghai Jiaotong University   *Jun 2017*

National Scholarship of China (Top 1%), Shanghai Jiaotong University   *Jan 2017*

Baogang Scholarship of China (Top 0.5%), Shanghai Jiaotong University   *Oct 2016*