ACL 2020

Main

1. Attend to Medical Ontologies: Content Selection for Clinical Abstractive Summarization

Workshops

2. Proceedings of the 19th SIGBioMed Workshop on Biomedical Language Processing
3. Automated Scoring of Clinical Expressive Language Evaluation Tasks
4. Information Retrieval and Extraction on COVID-19 Clinical Articles Using Graph Community Detection and Bio-BERT Embeddings
5. Feature Difference Makes Sense: A medical image captioning model exploiting feature difference and tag information

Demos

1. Trialstreamer: Mapping and Browsing Medical Evidence in Real-Time
2. BENTO: A Visual Platform for Building Clinical NLP Pipelines Based on CodaLab

ACL 2019

Main

1. Neural Text Simplification of Clinical Letters with a Domain Specific Phrase Table
2. Finding Your Voice: The Linguistic Development of Mental Health Counselors

Workshops

1. Proceedings of the 18th BioNLP Workshop and Shared Task
2. Proceedings of the Fourth Social Media Mining for Health Applications (#SMM4H) Workshop & Shared Task
3. Distributed Knowledge Based Clinical Auto-Coding System
4. Automated Cross-language Intelligibility Analysis of Parkinson's Disease Patients Using Speech Recognition Technologies
5. NLP Automation to Read Radiological Reports to Detect the Stage of Cancer Among Lung Cancer Patients

ACL 2018

Main

1. A Corpus with Multi-Level Annotations of Patients, Interventions and Outcomes to Support Language Processing for Medical Literature , citation 67
2. On the Automatic Generation of Medical Imaging Reports , 132

Workshops

1. Proceedings of the BioNLP 2018 workshop

ICLR

2. Clairvoyance: A Pipeline Toolkit for Medical Time Series (2021)

Workshop

1. IROF: a low resource evaluation metric for explanation methods (2020)
2. XGMix: Local-Ancestry Inference with Stacked XGBoost (2020)

NeurIPS

1. (2020) Temporal Positive-unlabeled Learning for Biomedical Hypothesis Generation via Risk Estimation
2. (2020) Collapsing Bandits and Their Application to Public Health Intervention
3. (2018) MiME: Multilevel Medical Embedding of Electronic Health Records for Predictive Healthcare , 78

ICML

3. (2020) Student-Teacher Curriculum Learning via Reinforcement Learning: Predicting Hospital Inpatient Admission Location

NLP

Dialogue

4. (2018) Task-oriented Dialogue System for Automatic Diagnosis , 37
5. (2020) Proceedings of the First Workshop on Natural Language Processing for Medical Conversations
6. (2019) Extracting Symptoms and their Status from Clinical Conversations
7. (2020) MIE: A Medical Information Extractor towards Medical Dialogues

Translation

1. (2019 task) Findings of the WMT 2019 Biomedical Translation Shared Task: Evaluation for MEDLINE Abstracts and Biomedical Terminologies
2. (2020) Document Translation vs. Query Translation for Cross-Lingual Information Retrieval in the Medical Domain

QA

3. (2020) Clinical Reading Comprehension: A Thorough Analysis of the emrQA Dataset
4. (2019) Towards Automating Healthcare Question Answering in a Noisy Multilingual Low-Resource Setting
5. (2019) HEAD-QA: A Healthcare Dataset for Complex Reasoning
6. (2019) On the Summarization of Consumer Health Questions
7. (2019 workshop) Question Answering in the Biomedical Domain

Concept / Entity

8. (2020) A Generate-and-Rank Framework with Semantic Type Regularization for Biomedical Concept Normalization
9. (2020) Closing the Gap: Joint De-Identification and Concept Extraction in the Clinical Domain
10. (2020) Clinical Concept Linking with Contextualized Neural Representations
11. (2020) Biomedical Entity Representations with Synonym Marginalization
12. (2019) Joint Entity Extraction and Assertion Detection for Clinical Text
13. (2019) Robust Representation Learning of Biomedical Names
14. (2019) Adversarial Learning of Privacy-Preserving Text Representations for De-Identification of Medical Records
15. (2019 ws) Deep Neural Models for Medical Concept Normalization in User-Generated Texts

16. (2019 ws) [Embedding Strategies for Specialized Domains: Application to Clinical Entity Recognition](#)
17. (2019 ws) [Evaluation of Scientific Elements for Text Similarity in Biomedical Publications](#)

Drug interaction / Reaction

18. (2020 demo) [SUPP.AI: finding evidence for supplement-drug interactions](#)
19. (2018) [Enhancing Drug-Drug Interaction Extraction from Texts by Molecular Structure Information](#) , 18
20. (2019 ws) [Detecting Adverse Drug Reactions from Biomedical Texts with Neural Networks](#)
21. (2019 ws) [Entity-level Classification of Adverse Drug Reactions: a Comparison of Neural Network Models](#)
22. (2019 ws) [Detecting Adverse Drug Reactions from Biomedical Texts with Neural Networks](#)

Causality

23. (2020 ICML) Causal Effect Estimation and Optimal Dose Suggestions in Mobile Health

Interpretability

24. (2020 ICML) DeepCoDA: personalized interpretability for compositional health data
25. [Representation learning for improved interpretability and classification accuracy of clinical factors from EEG (2021 ICLR)](#)
26. (2020 ACL) [Towards Interpretable Clinical Diagnosis with Bayesian Network Ensembles Stacked on Entity-Aware CNNs](#)
27. (2020 ACL) [Rationalizing Medical Relation Prediction from Corpus-level Statistics](#)
28. (2018 ACL demo) [Clinical-Coder: Assigning Interpretable ICD-10 Codes to Chinese Clinical Notes](#)

Drug Design / Discovery

4. [(2020 NeurIPS) CogMol: Target-Specific and Selective Drug Design for COVID-19 Using Deep Generative Models](#)

5. [(ICLR spotlight) MARS: Markov Molecular Sampling for Multi-objective Drug Discovery](#) (2021)

Medical Imaging

NeurIPS

1. (2020) [Domain Generalization for Medical Imaging Classification with Linear-Dependency Regularization](#)
2. [(2020) 3D Self-Supervised Methods for Medical Imaging](#)
3. (2020) [Contrastive learning of global and local features for medical image segmentation with limited annotations](#)
4. (2020) [Disentangling Human Error from Ground Truth in Segmentation of Medical Images](#)
5. (2019) [Transfusion: Understanding Transfer Learning for Medical Imaging](#)
6. (2018) [Hybrid Retrieval-Generation Reinforced Agent for Medical Image Report Generation](#)

ICLR

7. [Stabilized Medical Image Attacks (2021) (Spotlight)](#)

Diagnosis / Decision Making / Prediction

NeurIPS

1. [(2018) REFUEL: Exploring Sparse Features in Deep Reinforcement Learning for Fast Disease Diagnosis](#)
2. (2020) [Learning to Select Best Forecast Tasks for Clinical Outcome Prediction](#)

ACL

3. (2018) [Task-oriented Dialogue System for Automatic Diagnosis](#) , 37
4. (2020) [Towards Interpretable Clinical Diagnosis with Bayesian Network Ensembles Stacked on Entity-Aware CNNs](#)
5. (2018 workshop) [Biomedical Document Retrieval for Clinical Decision Support System](#)

ICML

6. (2020) Learning for Dose Allocation in Adaptive Clinical Trials with Safety Constraints
7. (2020) Clinician-in-the-Loop Decision Making: Reinforcement Learning with Near-Optimal Set-Valued Policies

8. (2020) On Validation and Planning of An Optimal Decision Rule with Application in Healthcare Studies
9. (2019) Direct Uncertainty Prediction for Medical Second Opinions
10. (2018) AutoPrognosis: Automated Clinical Prognostic Modeling via Bayesian Optimization with Structured Kernel Learning

Molecular

ICML

1. (2020) Hierarchical Generation of Molecular Graphs using Structural Motifs
2. (2020) Multi-Objective Molecule Generation using Interpretable Substructures
3. (2020) A Generative Model for Molecular Distance Geometry
4. (2020) Reinforcement Learning for Molecular Design Guided by Quantum Mechanics
5. (2020) Deep Molecular Programming: A Natural Implementation of Binary-Weight ReLU Neural Networks
6. (2020) Improving Molecular Design by Stochastic Iterative Target Augmentation
7. (2019) Molecular Hypergraph Grammar with Its Application to Molecular Optimization
8. (2018) Junction Tree Variational Autoencoder for Molecular Graph Generation

NeurIPS

4. (2020) On the equivalence of molecular graph convolution and molecular wave function with poor basis set
5. (2020) Self-Supervised Graph Transformer on Large-Scale Molecular Data
6. (2020) Reinforced Molecular Optimization with Neighborhood-Controlled Grammars
7. (2020) Guiding Deep Molecular Optimization with Genetic Exploration
8. (2020) Barking up the right tree: an approach to search over molecule synthesis DAGs
9. (2019) Deep imitation learning for molecular inverse problems
10. (2019) Symmetry-adapted generation of 3d point sets for the targeted discovery of molecules
11. (2019) A Model to Search for Synthesizable Molecules
12. (2019) N-Gram Graph: Simple Unsupervised Representation for Graphs, with Applications to Molecules
13. (2019) Cormorant: Covariant Molecular Neural Networks
14. (2018) Graph Convolutional Policy Network for Goal-Directed Molecular Graph Generation

15. (2018) Constrained Graph Variational Autoencoders for Molecule Design

ICLR

16. Directional Message Passing for Molecular Graphs (2020 spotlight)
17. Practical Massively Parallel Monte-Carlo Tree Search Applied to Molecular Design (2021)
18. Learning Neural Generative Dynamics for Molecular Conformation Generation (2021)
19. Conformation-Guided Molecular Representation with Hamiltonian Neural Networks (2021)
20. Symmetry-Aware Actor-Critic for 3D Molecular Design (2021)
21. Molecule Optimization by Explainable Evolution (2021)
22. GraphAF: a Flow-based Autoregressive Model for Molecular Graph Generation (2020)
23. Learning Multimodal Graph-to-Graph Translation for Molecule Optimization (2019)