

Sina Mahdipour Saravani

CONTACT	<i>E-mail:</i> sinamps@colostate.edu <i>Homepage:</i> sinamps.github.io
FIELDS OF INTEREST	<ul style="list-style-type: none"> ◇ Neural Language Representation, Interpretability in NLP, Figurative Language Identification, Commonsense Reasoning, Applications in Social Media Analysis ◇ Natural Language Processing, Deep Learning and Machine Learning for NLP
EDUCATION	<p>Colorado State University, Fort Collins, United States</p> <ul style="list-style-type: none"> ◇ M.S., Computer Science, In Progress 2020 - 2022 <ul style="list-style-type: none"> • Cumulative Grade Average: 4/4 <p>Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran</p> <ul style="list-style-type: none"> ◇ B.Sc., Computer Systems Architecture 2014 - 2019 <ul style="list-style-type: none"> • Cumulative Grade Average: 16.61/20
PUBLICATIONS AND MANUSCRIPTS	<ul style="list-style-type: none"> ◇ Sina Mahdipour Saravani, Ritwik Banerjee, and Indrakshi Ray. 2021. An Investigation into the Contribution of Locally Aggregated Descriptors to Figurative Language Identification. Accepted in <i>Workshop on Insights from Negative Results in NLP co-located with Conference on Empirical Methods in Natural Language Processing (EMNLP 2021 Workshop)</i>. ◇ Sina Mahdipour Saravani, Indrajit Ray, and Indrakshi Ray. 2021. Automated Identification of Social Media Bots using Deepfake Text Detection. Under review in <i>International Conference on Information Systems Security (ICISS 2021)</i>.
RESEARCH AND WORK EXPERIENCES	<ul style="list-style-type: none"> ◇ Research Assistant, Colorado State University, USA 2020 - Present <ul style="list-style-type: none"> • Supervisors: Dr. Indrakshi Ray and Dr. Ritwik Banerjee • Working on various NLP projects including the application of VLADs to NLP (for sarcasm detection in Twitter), claim/counterclaim detection in YouTube with regards to COVID-19 data, access control policy extraction from natural language documents, and machine translation for low-resource languages. ◇ Graduate Assistant, University of Nevada, Las Vegas, USA 2019 - 2020 <ul style="list-style-type: none"> • Supervisor: Dr. Kazem Taghva • Worked on Named Entity Recognition for Persian using a BiLSTM-CRF architecture. ◇ NLP Developer and Research Assistant, CommentMiner, Iran 2017 - 2018 <ul style="list-style-type: none"> • Supervisor: Mr. Ahmad Asadi • Worked in CommentMiner start-up on developing a set of text processing micro services and a question answering chat bot for Persian language. Services included short-text topic classification, profanity detection, NER, and sentiment analysis.
TEACHING AND MENTORING EXPERIENCES	<ul style="list-style-type: none"> ◇ Mentor, Colorado State University 2020 - 2021 <ul style="list-style-type: none"> • Mentored three undergraduate and two high school students for research in NLP. ◇ Temporary Teaching Faculty, University of Nevada, Las Vegas Summer 2020 <ul style="list-style-type: none"> • Computer Science II (CS202) course ◇ Teaching Assistant, University of Nevada, Las Vegas Spring 2020 <ul style="list-style-type: none"> • Data Mining (CS458/658) course, Instructor: Dr. Kazem Taghva ◇ Teaching Assistant, Amirkabir University of Technology (Tehran Polytechnic) Fall 2018 <ul style="list-style-type: none"> • Embedded & Real-Time Systems course, Instructor: Dr. Hamed Farbeh
PROFESSIONAL SERVICES	<ul style="list-style-type: none"> ◇ ICDCS 2021, Reviewer 2021

	<ul style="list-style-type: none"> ◇ TheWebConf 2021, Reviewer 2021 ◇ ACISP 2021, Reviewer 2021 ◇ IEEE S&P 2020, Reviewer 2020 ◇ IEEE TPS 2020, Reviewer 2020 ◇ Scientific Association and Olympiad Affairs Office of Computer Engineering Department at Amirkabir University of Technology, Industry Relations Officer 2015
RELEVANT PROJECTS	<ul style="list-style-type: none"> ◇ Investigation into the Application of VLAD to NLP for Figurative Language Identification, Colorado State University Investigated the application and effectiveness of vector of locally aggregated descriptors on top of Transformer-based language representation layers. Studied irony/sarcasm detection in Twitter as a use case. ◇ Deepfake Text Detection for Social Media Bot Identification, Colorado State University Implemented Transformer-based models to detect bot-generated text on a deepfake dataset resulting in performance improvements by using domain-specific pre-trained models. ◇ Claim/Counterclaim Pair detection in YouTube Comments, Colorado State University Currently designing a framework to extract claims and counterclaims from YouTube video comments by claim detection, stance detection, and NLI. ◇ Machine Translation for Similar Low-Resource Language Pairs with Loan Words, Colorado State University Currently studying the potential benefit of using loan words in similar languages to incorporate that knowledge into a machine translation framework. ◇ Extracting Access Control Policies from Natural Language Documents, Colorado State University Currently studying a transformer-based semantic role labeling approach for extracting access control policies and representing them in NGAC graphs. ◇ Implementation of Convolutional and Pooling Layers of a CNN on FPGA, Amirkabir University of Technology Implemented the convolutional and the max pooling functions of CNNs using Xilinx Vivado High-Level Synthesis and ran this project on a ZYBO SoC board. This design achieved up to 30 times faster throughput relative to the software code on a CPU. ◇ Activity Recognition with Wearable Sensor Dataset in Spark Platform, University of Nevada, Las Vegas Implemented scalable classification solutions (MLP Network, Logistic Regression, and Decision Tree) using Spark libraries for motion data of elderly people in a room.
HONORS AND AWARDS	<ul style="list-style-type: none"> ◇ Fully-funded Research Assistantship, Colorado State University 2020 ◇ UNLV Access Grant, University of Nevada, Las Vegas 2020 ◇ Fully-funded Graduate Assistantship, University of Nevada, Las Vegas 2019 ◇ Top 50 start-ups in GITEX start-ups competition, UAE (CommentMiner) 2017 ◇ 3rd place in ElecomStars start-ups competition, Iran (CommentMiner) 2017 ◇ 1st place grant in Sharif VC Cup start-ups competition, Iran (CommentMiner) 2017 ◇ Ranked top 0.2% in Nationwide University Entrance Exam in Math. & Physics, Iran 2014
RELEVANT SKILLS	<ul style="list-style-type: none"> ◇ PROGRAMMING: Python, Java, C/C++, C# ◇ TOOLS AND FRAMEWORKS: PyTorch, Keras, TensorFlow, Hugging Face Transformers, MALLET, Stanford NLP, polyglot, NLTK, OpenMP, CUDA, Docker ◇ OTHERS: L^AT_EX, Bash, Vivado and Hardware Design Softwares, Basic Web Programming
REFERENCES	Available upon request.