

# Jamshidbek Mirzakhlov

NATURAL LANGUAGE PROCESSING | MACHINE LEARNING

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## Research Interests

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- Neural Machine Translation (NMT) for low-resource languages
- Multilingual NLP & Cross-lingual transfer learning
- Automated Curriculum Learning for Natural Language Understanding (NLU) tasks

## Education

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### University of South Florida

M.S. IN COMPUTER SCIENCE

Research Advisors: Dr. Sriram Chellappan and Dr. John Licato

Tampa, Florida

Aug 2020 - present

### University of South Florida

B.S. IN COMPUTER SCIENCE | HONORS COLLEGE | OVERALL GPA: **3.84**

Research Advisor: Dr. Sriram Chellappan

Tampa, Florida

Aug 2016 - May 2020

## Publications & Patents

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1. **Mirzakhlov, J.**, Babu, A., McClinton, W., Chellappan, S., and Licato, J. (2020). Incorporating BERT Into Massively Multilingual Neural Machine Translation (2020), in review.
2. Laverghetta, A., **Mirzakhlov, J.**, Licato, J. (2020). Towards a Task-Agnostic Model of Difficulty Estimation for Supervised Learning Tasks (2020), accepted to appear at AACL-SRW 2020.
3. Minakshi, M., Bharti, P., McClinton, W., **Mirzakhlov, J.**, Carney, Ryan M., and Chellappan, S. (2020). Automating the Surveillance of Mosquito Vectors from Trapped Specimens Using Computer Vision Techniques. In ACM COMPASS 2020.
4. Chellappan, S., Bharti, P., Minakshi, M., McClinton, W. and **Mirzakhlov, J.**, University of South Florida, 2020. Leveraging smart-phone cameras and image processing techniques to classify mosquito genus and species. U.S. Patent Application 16/673,641.
5. Chellappan, **Mirzakhlov, J.**, and Kariev, Sh., University of South Florida, 2020. Ensuring Integrity of Email Content during Forwarding. USF Ref. No. 19B151
6. **Mirzakhlov, J.**, Babu, A., Andujar, M. (2020). Mudpoint: Evaluating Instructor Perception on a Continuous and Non-Specific Feedback System. In Learning and Collaboration Technologies. HCII 2020. Volume 12205 of the Lecture Notes in Computer Science.

## Research Experience

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### Advancing Machine and Human Reasoning Lab (Dr. John Licato)

RESEARCH ASSISTANT

- Explored the effect of deeply incorporated BERT embeddings on the performance of massively multilingual NMT
- Proposed a general curriculum learning framework for abductive Natural Language Inference (NLI) tasks

Tampa, FL

Jan 2020 - present

### USF Social Computing Lab (Dr. Sriram Chellappan)

RESEARCH ASSISTANT

- Worked on a team of 3 to develop a deep learning model for mosquito genus and species classification
- Developed a mobile and web platform for a team of social scientists for anonymous and qualitative metadata extraction from user phones

Tampa, FL

Jan 2018 - present

## Industry Experience

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### Salesforce

SOFTWARE ENGINEERING INTERN

- Developed, tested and deployed features for Salesforce Blockchain Platform (BCP)
- Explored and analyzed various storage options for GDPR compliant practices at BCP
- Prototyped an OData-based module that integrates the core concepts of blockchain and GDPR compliant storage solutions

San Francisco, CA

May 2020 - Aug 2020

## IBM Research

RESEARCH INTERN

Yorktown, NY

May 2019 - Aug 2019

- Automated the deployment of AML and time-series prediction models to cloud environment using Docker and Kubernetes
- Prototyped a general-purpose framework for service deployment to reduce the cloud migration time for researchers

## Community Engagement

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### Language Technologies for Central Asia (LTCA)

FOUNDER & GROUP LEAD

Virtual

Sep 2020 - present

- A community of researchers, programmers and linguists with a mission to build language technologies for languages spoken in Central Asia
- Leading a team of 10+ on the creating datasets, developing NLP models and conducting academic research

### Society of Competitive Programmers

CO-FOUNDER & PRESIDENT

Tampa, FL

Jan 2018 - Dec 2019

- Student organization that helps to foster hackathon culture at USF and supports students in their hackathon trips around the nation
- Helped USF improve in annual Major League Hacking (MLH) rankings from 117th to 44th in the nation in a span of 2 years
- Reached over 350 active members and enabled more than 150 students experience their first hackathons
- Acquired over \$20k in funding for student travel through industry partnerships

### USF Engineering EXPO

VOLUNTEER DIRECTOR & EXHIBITOR

Tampa, FL

April 2018 - Feb 2019

- Worked with a committee of 30 students to collaborate on a two-day event organized for over 10,000 K-12 kids interested in STEM fields
- Lead a team of over 200 student volunteers by distributing tasks, assigning daily goals, scheduling, and event set up/break down

## Presentations & Demos

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2020	<b>Learning and Collaboration Technologies, HCII 2020,</b> "Mudpoint: Evaluating Instructor Perception on a Continuous and Non-Specific Feedback System."	Copenhagen, Denmark
2019	<b>USF Undergraduate Research Colloquium,</b> "Citizen Epidemiology: Enabling Citizens to Automatically Classify Genus and Species of Mosquitoes from Smartphone Images via Deep Learning"	Tampa, FL
2018	<b>Orlando-IX,</b> "USF Neuro-Machine Interaction Brain Drone Racing Simulation Demo"	Orlando, FL

## Honors & Awards

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2020	<b>Category Award,</b> HackGT 7 at Georgia Institute of Technology	Atlanta, GA
2020	<b>Top 50 Inspirational Hackers of 2020,</b> Major League Hacking	New York, NY
2019	<b>Category Award,</b> HackGT 6 at Georgia Institute of Technology	Atlanta, GA
2019	<b>Category Award,</b> PennApps XX at Univ. of Pennsylvania	Philadelphia, PA
2019	<b>2nd Place,</b> Hackabull 2019 at Univ. of South Florida	Tampa, FL
2019	<b>1st Place,</b> KnightHacks 2019 at Univ. of Central Florida	Orlando, FL
2019	<b>Award,</b> Dean's List of Scholars (x4)	Tampa, FL
2019	<b>Scholarship,</b> USF Chair's Scholarship (\$500)	Tampa, FL
2019	<b>Scholarship,</b> Honors Community Engagement Scholarship (\$600)	Tampa, FL
2018	<b>Category Award,</b> CalHacks 5.0 at UC Berkeley	Berkeley, CA
2018	<b>Category Award,</b> MHacks X at Univ. of Michigan	Ann Arbor, MI
2016	<b>Scholarship,</b> USF Green & Gold Presidential Scholarship (\$48,000)	Tampa, FL

## Skills

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**Languages** Python, Java, C++, JavaScript

**Libraries** NLTK, PyTorch, Keras, Tensorflow, HuggingFace, Jiant, Fairseq, OpenCV, GCP

**Tools** Android Studio, React Native, Unity, Flask, Tomcat, Kubernetes, Docker, Git, REST