

# MORGAN BYERS

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## EDUCATION

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**Ph.D. in Computer Science** Enrollment for Fall 2021  
Expected acceptance by March 2021

**Bachelor of Science in Computer Science and Mathematics** May 2021  
Texas State University | San Marcos, Tx  
In Major GPA: 4.0

## RESEARCH

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**“A Multimodal Approach to Stress Detection”** May 2021

*Undergraduate honors thesis*

*Advisor: Dr. Vangelis Metsis*

Using both audio and textual data, I explore methods for multimodal deep learning in order to classify stress levels found in interviews with patients suffering from PTSD and social anxiety.

**“Understanding Anxiety: Detecting Stress Factors through Text Analysis”** June – Aug. 2020

*Research Experiences for Undergraduates program*

Under the supervision of Dr. Vangelis Metsis, I researched applications of machine learning techniques such as deep BRNN's to classify stress levels of sentences in transcribed interviews with PTSD patients. I explored topic modelling methods to provide qualitative data about social anxiety. This project is supported by the National Science Foundation under Grant No. 1757893

## WORK EXPERIENCE

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**Research Assistant**, Texas State University August 2020 - Present

Working under the supervision of Dr. Vangelis Metsis, I explored extensions of my prior research by experimenting with additional deep learning architectures including transformer models and transfer learning

**Digital Product Developer**, The University Star January 2019 - Present

Maintained front- and back-end of website using Wordpress CMS. Ensured compliance with WCAG 2.0. Improved mobile experience through adaptive CSS. Regularly explained technical concepts to peers without web development experience.

## PUBLICATIONS

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### *Conference Papers*

M. Byers, V. Metsis, “Text analysis for understanding symptoms of social anxiety in student veterans,” in *The Thirty-Fifth AAAI Conference on Artificial Intelligence proceedings of the Undergraduate Consortium*, virtual, 2021.

## HONORS AND AWARDS

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First place, REU poster competition	August 2020
Academic Excellence Award – Computer Science	Spring 2020
Outstanding Undergraduate Award – Mathematics	Spring 2020
Ross & Sarah Wayment Endowed Scholarship Recipient	Spring 2020
Dean's List	Spring 2018 – Spring 2020
Carr Excellence Scholar	Fall 2017, Spring 2018

## TECHNICAL SKILLS

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### **Programming languages**

Proficient in Python, Java, C++, HTML, and CSS

Experienced in C, Javascript, PHP, SQL, and Assembly

### **Libraries**

Knowledgeable with TensorFlow, Keras, Scikit-learn, and PyTorch

### **Miscellaneous**

Agile methodologies

UML

WCAG 2.0