

# Sloke Shrestha - CV

Undergraduate Student  
The University of Texas Tyler  
Department of Electrical Engineering, RBN 2024  
University of Texas at Tyler  
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## Education

**The University of Texas at Tyler, USA** 2018 – 2022 (anticipated)  
Bachelor of Science in Electrical Engineering  
Department of Electrical Engineering  
Minor in Mathematics  
Major GPA: 4.0/4.0  
Cumulative GPA: 3.96/4.0

**Research Interest:** Human Computer Interaction, Wearables, Ubiquitous Computing

## Publications

- [1] Carreiro S, Taylor M, **Shrestha S**, Reinhardt M, Gilbertson N, Indic P. Realize, Analyze, Engage (RAE): A digital tool to support recovery from substance use disorder. *J Psychiatry Brain Sci*. 2021
- [2] Carreiro S, Chintha KK, **Shrestha S**, Chapman B, Smelson D, Indic P. Wearable sensor-based detection of stress and craving in patients during treatment for substance use disorder: A mixed methods pilot study. *Drug and Alcohol Dependence*. 2020, 107929.
- [3] **Shrestha S**, Taylor M, Leach R, Carreiro S, Indic P. Detection of craving and stress in patients with substance use disorder using wearable sensor data with bagged decision trees algorithm (*in preparation*).
- [4] VNSA Amperayani, **Shrestha S**, Colm T, Ambalavanan N, Indic P. Machine Learning Algorithms for the Prediction of Bradycardia Risk in Preterm Infants (*in preparation*).

## Work Experience

|   |                |
|---|----------------|
| <b>MIT CSAIL</b> , Massachusetts Institute of Technology, USA<br>Visiting Student. Department of Electrical Engineering and Computer Science<br>Advisor: Professor Stefanie Mueller | 2021(Summer)   |
| <b>Predictive Analytics Lab</b> , The University of Texas at Tyler, USA<br>Research Assistant. Department of Electrical Engineering<br>Advisor: Professor Premananda Indic          | 2019 – Present |
| <b>PASS Tutoring Centre</b> , The University of Texas at Tyler, USA<br>Supervisor: Ceselie Tobin  | 2019 (Spring)  |

## Awards and Honors

|  |                |
|--|----------------|
| Autodesk Tapia Scholarship, Richard Tapia '20 Conference   | 2020           |
| Integration Bee Runner Up, The University of Texas at Tyler Math Club  | 2019           |
| President's Honor Roll, The University of Texas at Tyler   | 2019 - Present |
| Dean's List, The University of Texas at Tyler  | 2018           |
| Presidential Fellow Scholarship, The University of Texas at Tyler<br>(Full tuition, fees, books, room and board covered) | 2018 - 2022    |

## Memberships of Professional Societies:

|   |                |
|---|----------------|
| Vice President, UT Tyler IEEE Corona Chapter        | 2021 - Present |
| Junior Representative, UT Tyler IEEE Corona Chapter | 2020 - 2021    |
| IEEE (Student Member)                               | 2019 - Present |

## Role in Funded Projects:

Undergraduate Research Assistant 2019 – Present  
NIH SBIR 1R44DA046151: *RAE (Realize, Analyze, Engage) - A digital biomarker-based detection and intervention system for stress and cravings during recovery from substance abuse disorders* ([1], [2]).

Principal Investigators:

Stephanie Carreiro, MD, University of Massachusetts Medical School  
Premananda Indic, PhD, The University of Texas at Tyler  
Megan Reinhardt, BS, RAE Health

The goal of the project is to develop machine learning algorithms for the detection of cravings and stress in individuals with substance abuse.

Role in the Project: Developing machine learning algorithms and working with professional software engineers to ensure quality data flow from device to server.

Undergraduate Research Assistant 2019 – Present  
NIH 1U01 HL133536: *Prematurity-related ventilatory control (Pre-Vent)*

Principal Investigators:

Namasivayam Emblicanin, MD, University of Alabama at Birmingham  
Premananda Indic, PhD, The University of Texas at Tyler

The goal of the project is to understand the physiological mechanisms associated with apnea of prematurity and develop machine learning algorithms for the prediction of life-threatening events in preterm infants.

Role in the Project: Developing machine learning algorithms.

LAST MODIFIED: August 16, 2021