Sloke Shrestha

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GitHub: https://github.com/slokeshrestha26
Webpage: slokeshrestha26.github.io

EDUCATION

Bachelor of Science in Electrical Engineering (B.S.E.E).   2018 – 2022
Minor in Mathematics   (anticipated)
The University of Texas at Tyler
Major GPA: 4.0/4.0
Cumulative GPA: 3.94/4.0

RESEARCH INTERESTS

Human Computer Interaction, Health Monitoring, 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

IN PREPARATION

[3] **Shrestha S**, Taylor M, Chaudary S, Leach R, Carreiro S, Indic P. Detection of craving and stress in patients with substance use disorder using wearable sensor data using Machine Learning

[4] VNSA Amperayani, **Shrestha S**, Colm T, Ambalavanan N, Indic P. Machine Learning Algorithms for the Prediction of Bradycardia Risk in Preterm Infants

RESEARCH EXPERIENCE

Visiting Student   Summer 2021 – December 2021
EECS, CSAIL, Massachusetts Institute of Technology
Advisor: Professor Stefanie Mueller
Project: Electrical Impedance Tomography (EIT) toolkit

- Performing benchmark tests for image reconstruction algorithms in EIT by calculating mean squared error using python, MATLAB, and swift.
- Implementing Gauss-Newton Solver for Electrical Impedance Tomography (EIT) in Swift.

MATLAB, swift, python, XCode, iOS development, mobile health

Sloke Shrestha - CV

Undergraduate Research Assistant   Summer 2019 - Present
Department of Electrical Engineering, The University of Texas at Tyler
Advisor: Professor Premananda Indic
Project: Machine Learning to Detect Cravings and Stress in Patients with Substance Use Disorder
- Developed machine learning algorithms (svm, ensemble) to detect stress and cravings using MATLAB and python. Increased accuracy by 20 percent [1, 2].
- Developed a feature extraction pipeline for supervised machine learning using MATLAB and python.
- Developed data parsing API for annotated time series data in python.
- Collaborated and coordinated with multidisciplinary team of MDs, PhDs, engineers, and industry professionals to build a consumer-grade product.
- Reviewed data fidelity from a wearable sensor and mobile framework used in clinical trials.

MATLAB, python, machine learning, time series data, bio-signal processing, mobile health

TEACHING EXPERIENCE

Laboratory Assistant, Linear Circuits   Spring 2021
Department of Electrical Engineering, The University of Texas at Tyler
Supervisor: Professor Premananda Indic
- Presented hands on circuit implementation to a class of about 10.

PASS Tutor   Spring 2019
Academic Success, The University of Texas at Tyler
- Tutored about 15 students every week for Chemistry, Physics, and Calculus.

AWARDS AND HONORS

Tapia Scholarship, Richard Tapia '21 Conference	2021
Autodesk Tapia Scholarship, Richard Tapia '20 Conference	2020
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	2018 - 2022
(Full tuition, fees, books, room and board covered)	

MEMBERSHIP IN 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

LANGUAGES

English: Proficient
Nepali: Proficient
Hindi: Fluent

LAST MODIFIED: January 6, 2022

Sloke Shrestha - CV