Sloke Shrestha

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EDUCATION

University of Texas at Austin — Austin, TX
PhD in Electrical and Computer Engineering; Advised by Dr. Edison Thomaz — *Aug. 2022 – May 2027*
Affiliated to Wireless Networking and Communications Group (WNCG)
Related Coursework: Algorithms

The University of Texas at Tyler — Tyler, TX
Bachelor of Science in Electrical Engineering; GPA: 3.9/4.0 — *Aug. 2018 – May 2022*
Related Coursework: Object Oriented Paradigm

Research Interests: Human Centered Computing, Ubiquitous Computing, Health Monitoring

EXPERIENCE

Undergraduate Research Assistant, The University of Texas at Tyler — Tyler, TX
Predictive Analytics Lab | Advisor: Premananda Indic — *May 2019 - May 2022*

- Developed machine learning training pipeline and trained models to detect drug craving events in patients with substance use disoder. Model accuracy was 75%
- Reviewed data fidelity from commercial wearable sensors, enabling important decision making during clinical trails
- Led weekly machine learning workshops which educated students and researchers about the technology
- Collaborated with MDs, Ph.Ds, engineers, and business executives to bring a preliminary product in the market

Visitng Student Researcher, Massachusetts Institute of Technology — Cambridge, MA
Computer Science & Artificial Intelligence Laboratory | Advisor: Stefanie Mueller — *Mar. 2021 - Dec. 2021*

- Benchmarked image reconstriction algorithm and demonstrated the image fiedlity of mobile Electrical Impedance Tomography visualization application
- Implemented Gauss - Newton Solver, a partial differntial equation solver, in Swift, adding a feature to a toolkit

TEACHING

Laboratory Assistant, The University of Texas at Tyler — Tyler, TX
Supervisor: Premananda Indic | EENG 3104: Linear Circuits I — *Jan. 2021 - May 2021*

PROJECT EXPERIENCE

Wearable Sensor Framework — Tyler, TX
Senior Capstone Project — *Jan 2021 - May 2022*

- Programmed microcontrollers to acquire physiological data from a human wrist which can be used for medical applications
- Worked with 5 undergraduate colleagues and 2 supervisor professors in a fast paced software/hardware based project
- Trained colleagues in github which enabled a good version control of the project

Skills

Languages: Python, MATLAB, C, Swift, Java
Frameworks: Scikit-Learn, Pandas, Numpy, Xcode
Tools: GitHub, Shell(Bash, Zsh), Linux

Awards and Honors

- UT Austin Engineering Fellowship, University of Texas at Austin — 2022
- Presidential Fellow Scholarship, The University of Texas at Tyler — 2018 - 2020
- Tapia Scholarship, Richard Tapia '21 Conference — 2022
- Autodesk Tapia Scholarship, Richard Tapia '20 Conference — 2020
- President's Honor Roll, The University of Texas at Tyler — 2019 - 2020
- Dean's List, The University of Texas at Tyler — 2018

Publications

1. Stephanie Carreiro, Melissa Taylor, **Sloke Shrestha**, Megan Reinhardt, Nicole Gilbertson, and Premananda Indic. Realize, analyze, engage (rae): **A digital tool to support recovery from substance use disorder.** *Journal of psychiatry and brain science*, volume 6. NIH Public Access, 2021

2. Stephanie Carreiro, Keerthi Kumar Chintha, **Sloke Shrestha**, Brittany Chapman, David Smelson, and Premananda Indic. **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,* volume 209, page 107929. Elsevier, 2020.

3. **Sloke Shrestha**, Joshua Stapp, Melissa Taylor, Rebecca Leach, Stephanie Carreiro, Premananda Indic. **Towards device agnostic detection of stress and craving in patients with substance use disorder.** *HICCS, 2023* (Resubmitted)