Sloke Shrestha

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Education

- **University of Texas at Austin** — Austin, TX
  MS/PhD in Electrical and Computer Engineering | Advisor: Dr. Edison Thomaz — *Aug. 2022 – May 2027*
  Affiliated to Wireless Networking and Communications Group (WNCG)
- **The University of Texas at Tyler** — Tyler, TX
  Bachelor of Science in Electrical Engineering; GPA: 3.9/4.0 — *Aug. 2018 – May 2022*
  Research Interests: Human Centered Computing, Ubiquitous Computing, Health Monitoring

Experience

- **The University of Texas at Austin, Graduate Research Assistant** — Austin, TX
  Human Signals Lab — *Aug 2022 - Present*
  - Built Mobile applications in iOS using Swift and Xcode platform to run experiments related to concerning smartphone user interaction inference using passive sensing
  - Collaborated with two undergraduate research assistants to review papers and design experiments
- **The University of Texas at Tyler, Undergraduate Research Assistant** — Tyler, TX
  Predictive Analytics Lab — *May 2019 - May 2022*
  - Developed machine learning training pipeline using Python. The pipeline automated data preprocessing which quadrupled work productivity
  - Led weekly machine learning workshops where I helped five students and researchers understand machine learning literature better
  - Collaborated with MDs, Ph.Ds, engineers, and business executives to bring an experimental wearable health framework, RAE Health, to the market
- **Massachussets Institute of Technology (MIT), Visitng Research Assistant** — Cambridge, MA
  Computer Science & Artificial Intelligence Laboratory — *Mar. 2021 - Dec. 2021*
  - Benchmarked an image reconstruction algorithm and quantified the image fidelity of a Tomography visualization app, in a toolkit called EIT-kit, using Swift and Python
  - Implemented a partial differential equation solver in Swift which was used in the visualization app

Teaching

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

Project

- **Wearable Sensor Framework | C, C++**
  Senior Capstone Project — *Jan 2021 - May 2022*
  - Programmed two microcontrollers, Teensy 4.1 and Atmel SAMD21 using C/C++ to acquire physiological data from a human wrist
  - Trained four colleagues in github which enabled a good version control of the project
- **Echolocation Robot | C**
  Senior Capstone Project — *Jan 2021 - May 2022*
  - Built an autonomous robot that leverages high frequency sound waves echolocation to avoid obstacles. Programmed Arduino Uno with C.

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. **Sloke Shrestha**, Joshua Stapp, Melissa Taylor, Rebecca Leach, Stephanie Carreiro, Premananda Indic. (2023) **Towards device agnostic detection of stress and craving in patients with substance use disorder.** *Proceedings of the 56th Annual Hawaii International Conference on System Sciences. (p. 3156-3163)*
2. 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
3. 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.

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