# Snehal Shokeen

Linkedin

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## Experience

### Research Intern at GIX, June 2021 - Present

Research project to develop a sensor fusion (mmWave radar + camera) deep learning algorithm to classify Atrial Fibrillation. Used the MilliEye paper as foundation for sensor fusion and ICA/PCA dimension reduction for blind source separation to concatenate data tensors. Used MTTS-CAN as back-bone for neural net architecture, and sped up existing preprocessing and synchronization code by 47% for upcoming clinical trials at UW Medical Center.

### Computer Vision Engineer at Advanced Robotics UW, January 2020 - November 2020

Responsible for training and testing computer vision models and operating a mounted turret to accurately shoot five armored modules attached to a disk with a sinusoidal rotation speed. Used Kalman filtering for trajectory optimization and worked with various neural nets: multi-dimensional RNN, ContextVP, Yolo, CenterNet.

### Deep Learning Research, December 2019 - November 2020

This research project with UW professor Georgy Manucharyan aims to demonstrate that Sea Surface Height (SSH) patterns of mesoscale turbulence contain enough information to predict eddy heat fluxes. I am responsible for automating the data collection of around 50,000 images (optical & infrared) and then using Tensorflow's CNNs to draw insights and make predictions.

## Projects

### Julius Caesar Q&A Chatbot, November 2019

Used Nltk and Tensorflow's neural network capabilities to build a Julius Caesar Q&A chatbot that can compensate for spelling-errors and different ways of phrasing a question. This program built from scratch. Code and demo can be found on Github: https://github.com/snehal-sas/CaesarChatbot. Watching demo highly recommended.

### Arduino Motion Detecting Light System, September 2019

Used an Arduino Uno Rev3 microcontroller to build a light system that, using servos, flips a light switch on and off every time someone trips the motion detectors. As an additional feature, since the motion detectors use modulated Infrared rays to function, the motion detectors can be remotely triggered using TV remotes or RC car controllers. Code on Github: https://github.com/snehal-sas/ArduinoLightSystem.

## Education

University of Washington, Seattle - Computer Science. Graduation: 2023

## Coursework

Machine Learning, Data structures and algorithms, Linear Algebra, Discrete Mathematics

## Skills

Python, Java, Deep Learning, Computer Vision, Machine Learning