Radhika Saraf

Website: tx.ag/RadhikaSaraf
GitHub: sarafradhika
Email: saraf.radhika@tamu.edu
Phone: (979)-985-7385

Work Experience

June 2017 – Present
Texas A&M Engineering Experiment Station
Research Assistant

Working on probabilistic and mathematical modeling of cell signaling pathways in cancer to predict theoretical drug efficacies.

August 2014 – June 2015
Honeywell Automation India Limited
Graduate Engineer Trainee

Six Sigma Green Belt Certified
Experion DCS and SCADA

Education

Present **Electrical Engineering**
Doctor of Philosophy
Texas A&M University, College Station TX

2017 **Electrical Engineering**
Master of Science
Texas A&M University, College Station TX

2014 **Instrumentation and Control**
Bachelor of Engineering
Cummins College of Engineering for Women, India

Leadership Experience

2018 **Co-Founder**
Women in IEEE Affinity Group

2018 **Student Advisor**
Indian Graduate Students' Association

2017 **Vice President for Quality of Life**
Electrical and Computer Engineering Graduate Students' Association

2016 **Delegate representing Electrical and Computer Engineering**
Graduate & Professional Student Council

2014 **Co-Leader**
Environment Club

Publications

2018 **An in-silico study examining the induction of apoptosis by Cryptotanshinone in metastatic melanoma cell lines**
BMC Cancer

2017 $\mathcal{H}_2$ **Optimal Sensing Architecture with Model Uncertainty**
American Control Conference

Projects

2018
Structural Bioinformatics
Drug Target Interaction Prediction using network information

Inductive matrix completion techniques to identify potential drug targets, followed by validation using data from biological experiments.

2018
Machine Learning
Predicting the cleavage site using HIV-1 protease cleavage data

Kernelized support vector machines from the *scikit-learn* package in Python to better accuracy of the prediction.

2018
Advanced Probabilistic Graphical Models
Modeling cell survival pathways in Melanoma using Bayesian Networks

Crude model of the biological pathways in melanoma to show the development of TRAIL resistance using MATLAB and the *pgmpy* package in Python.

2017
Probabilistic Graphical Models
Sequential labeling of data using conditional random fields

Natural language processing program written using the *nltk* package in Python that sorts songs into different moods based on the lyrics.

2017
Master's Thesis
$\mathcal{H}_2$ **optimal information architecture for systems with model uncertainty**

2014
Undergraduate Research
Design and implementation of a robust PID controller

Course Work

Machine Learning with Networks
Data Mining and Analysis
Algorithms In Structural Bioinformatics
Applications of Bayesian Methods
Game Theory

Software Skills

Python	★★★★★
MATLAB	★★★★★
SIMULINK	★★★★
R	★★★