

Supreeth Prajwal Shashikumar

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EXPERTISE

Predictive analytics in Healthcare

Applied Deep Learning

Google Cloud – ML Engine

Streaming analytics

Signal Processing

Multivariate time series

LANGUAGES

Python, MATLAB, C

TOOLS AND TECHNOLOGIES

Tensorflow, PyTorch, Hidden Markov Model
Toolkit (HTK).

RELEVANT COURSES

Machine Learning for Trading, *Fall 2017*

Bayesian Statistics, *Spring 2017*

Deep Learning, *Spring 2016*

Statistical Machine Learning, *Fall 2015*

AWARDS

2017 Snorkel Workshop Travel award

SERVICE AND LEADERSHIP

Teaching Assistant, Deep Learning, *Emory University, Spring 2017*

Moderator, BMI Journal Club, *Dept. of Biomedical Informatics, Emory University*

Research Symposium Chairperson, *NITK*

Freshman Programming Tutor, *NITK*

HOBBIES

Travelling, Hiking

EDUCATION

Georgia Institute of Technology

PhD, Electrical and Computer Engineering

Atlanta, GA

2015 - Present

National Institute of Technology - Karnataka

Bachelor of Technology, Electronics & Communication Engg.

Mangalore, India

2011 - 2015

RESEARCH

Department of Biomedical Informatics, Emory University

Graduate Research Assistant | Jan 2016 - Present

Develop computational tools and machine learning algorithms for analysis of healthcare data. Application areas include prediction of Sepsis in the ICU, Arrhythmia detection using ambulatory and wearable technologies.

Advisors: Shamim Nemati, PhD and Gari Clifford, DPhil

Speech Technology Laboratory, Indian Institute of Technology - Guwahati

Undergraduate Research Assistant | July 2013 – Jan 2015

Worked on Speech recognition and Speech analysis. Developed algorithms for detection of vowel onset and vowel end points in speech.

Advisors: S. R. M. Prasanna, PhD

INDUSTRY

Qualcomm Incorporated, Bangalore, India

Engineering Intern | May 2014 – July 2014

Worked in the System Performance Team to review the thermal framework of Qualcomm's flagship Snap-dragon chipsets.

PUBLICATIONS (PUBLISHED)

Supreeth P. Shashikumar, Qiao Li, et al., "Multiscale Network representation of physiological time series for early prediction of sepsis", *In Physiological Measurement*, Nov 2017

Supreeth P. Shashikumar, Matthew D. Stanley, et.al, "Early sepsis detection in critical care patients using multiscale blood pressure and heart rate dynamics", *In Journal of Electrocardiology*, 2017

Supreeth P. Shashikumar, Amit J. Shah, et al., "A deep learning approach to monitoring and detecting atrial fibrillation using wearable technology", *In 2017 IEEE International Conference on Biomedical & Health Informatics*

Biswajit D. Sarma, **Supreeth P. Shashikumar**, et al., "Improved vowel onset and offset points detection using besel features", *In 2014 International Conference on Signal Processing and Communications (SPCOM)*

PUBLICATIONS (SUBMITTED/IN-PREPARATION)

Supreeth P. Shashikumar, Amit J. Shah, et al., "Detection of Paroxysmal Atrial Fibrillation using attention based bidirectional Recurrent Neural Networks", *Submitted to KDD 2018*

Joel Henry, Dennis Lynch, Jeff Mals, **Supreeth P. Shashikumar**, et al., "A FHIR-Enabled streaming sepsis prediction system for ICUs", *Submitted to 40th International Conference of the IEEE Engineering in Medicine and Biology Society 2018*

Erik P. Reinertsen, **Supreeth P. Shashikumar**, et al., "Locomotor-heart rate interactions assessed by novel multiscale network dynamics allow objective assessment of schizophrenia patients", *Submitted to Annals of Biomedical Engineering*

Supreeth P. Shashikumar, Shamim Nemati, et al., "A deep learning approach to early prediction of Sepsis in ICU", *In preparation*

Qiao Li, Qichen Li, **Supreeth P. Shashikumar**, et al., "Sleep Staging Classification from Electrocardiogram using a Deep Learning Approach", *In preparation*

PATENTS

Shamim Nemati, Gari D. Clifford, **Supreeth P. Shashikumar**, Andre Holder, "System for predicting or identifying patient deterioration or improvement", United States provisional patent application #62/534,322, filed July 19, 2017

Shamim Nemati, **Supreeth P. Shashikumar**, et al., "Method for detecting abnormal cardiac activity", United States provisional patent application #62/437,457, filed December 21, 2016