Supreeth Prajwal Shashikumar

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Website: https://supreethprajwal.github.io/
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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

Probabilistic Graphical Models, *Spring 2018*
Machine Learning for Trading, *Fall 2017*
Bayesian Statistics, *Spring 2017*
Deep Learning, *Spring 2016*
Statistical Machine Learning, *Fall 2015*

AWARDS

KDD 2018 student travel award

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 — Atlanta, GA
PhD, Electrical and Computer Engineering — 2015 - Present

National Institute of Technology - Karnataka — Mangalore, India
Bachelor of Technology, Electronics & Communication Engg. — 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

Microsoft Research Cambridge, UK
Research Intern | May 2018 – August 2018
Working in the Healthcare AI team on developing interpretable models for predicting clinical outcomes of patients with Traumatic Brain Injury.

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/ACCEPTED)

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*

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

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

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

PUBLICATIONS (SUBMITTED/IN-PREPARATION)

Supreeth P. Shashikumar, Shamim Nemati, et al., "End-to-End development and deployment of a deep learning model for early prediction of Sepsis", *In preparation*

Erik P. Reinertsen, **Supreeth P. Shashikumar,** et al., "Multiscale network dynamics between heart rate and locomotor activity are altered in schizophrenia", *Submitted to Physiological Measurement*

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