RAJ VIPANI

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EDUCATION

Boston University, Boston, MA   **Expected: December 2020**
Master of Science, Electrical and Computer Engineering

Heritage Institute of Technology, Kolkata, India   **July 2018**
Bachelor of Technology, Electrical Engineering. (CGPA: 8.68/10)

WORK EXPERIENCE

Tata Consultancy Services Ltd.   **July 2018 – May 2019**
Assistant Systems Engineer – Trainee
- Developed Hardware-in-Loop Test Models with the help of block diagram programming for the testing of electrical control units used in the process of manufacturing automobiles.
- Selected as Scrum Master for a team of 8 to create an end to end Flight Management System implementing agile methodology in the .Net Framework using C#, Structured Query Language and basic HTML/CSS.

Heritage Institute of Technology   **April 2017 – May 2018**
Department of Electrical Engineering – Research Assistant
- Assisted Prof. Saibal Dutta with his research on biomedical signal analysis and classification. Over the period of one year, we published 5 research papers and worked on a final year major thesis.

Government College of Engineering and Textile Technology   **July 2017 – August 2017**
Simulations Laboratory – Research Intern
- Developed a model for the analysis and prediction of the stock value of companies listed under the NIFTY 50 market index using a RBF - kernel based Support Vector Regressor.

SKILLS AND TECHNICAL PROFICIENCIES

- Programming Languages: Python, Scikit, Pandas, Numpy, TensorFlow, Keras, C++, C#, Structured Query Language, HTML (Basics).
- Frameworks and Software Skills: MATLAB/Simulink, .Net Framework, Visual Studio, Microsoft Office Package, Object Oriented Programming.
- Verbal Language Skills – English, Hindi, Gujarati, Bengali.

PROJECT EXPERIENCE AND PUBLICATIONS

- **Finance Management Application (Java, Firebase, Android Studio)**   **Oct, 2019 – Dec 2019**
  Developed an android application for a user to manage their day to day expenses.
  https://github.com/rajvipani/FinancialApp

- **Twitter Sentiment Analysis (**Python**)**   **Sep 2019**
  Developed a sentiment analyzer using Tweepy API and Google Natural Language Processing API.
  https://github.com/rajvipani/MiniProject1

- S. Hore, **R. Vipani**, P. Das, S. Dutta; "Prediction of Stock Value Using NIFTY 50 Market Index and RBF-Kernel Based Support Vector Regressor"; International Journal of Advance Research in Science and Engineering. Volume – 07, Special Issue – 03. pp. 694-703; April 2018.
  http://www.ijarse.com/images/fullpdf/1523725964_404IJARSE.pdf

- **R. Vipani**, S. Hore, S. Basak, S. Dutta; "Hilbert Transform and RBF-Kernel Based Support Vector Machine Synergy for Automatic Classification of EEG Signals"; International Journal of Latest Trends in Engineering and Technology, Volume – 9 Issue – 3. pp. 22-28; Jan 2018.
https://www.ijltet.org/journal/151799706004%202029.pdf

- **R. Vipani**, S. Hore, S. Basu, S. Basak, S. Dutta; "Identification of Epileptic Seizures using Hilbert Transform and Learning Vector Quantization Based Classifier"; 2017 IEEE Calcutta Conference; Dec 2017.
https://ieeexplore.ieee.org/document/8280702

- **R. Vipani**, S. Hore, S. Basak, S. Dutta; "Gait Signal Classification Tool Utilizing Hilbert Transform Based Feature Extraction and Logistic Regression Based Classification"; 2017 IEEE International Conference on Research in Computational Intelligence and Communication Networks; Nov 2017.
https://ieeexplore.ieee.org/document/8234481

- **R. Vipani,** S. Hore, S. Basak, S. Dutta; "Detection of Epilepsy Using Hilbert Transform and KNN Based Classifier"; 2017 IEEE International Conference on Smart Technologies and Management for Computing, Communications, Controls, Energy and Materials; Aug 2017
https://ieeexplore.ieee.org/document/8089167

AWARDS AND ACHIEVEMENTS

- Conceptualized the circuit making competition "**Circuit Spark**" for **Dakshh, 2017** (Technology Festival of Heritage Institute of Technology).
- **Class Representative**, Students Council of Heritage Institute of Technology, **2014 - 2016**
- **Certificate of Merit "High Distinction"**, **Royal Australian Chemical Society**, **2013**

VOLUNTEERING EXPERIENCE

- **Committee Member**, Sadharmik Group (A Local Charitable Organization), April 2013 - June 2018
- **Committee Member**, Entrepreneurship Development Cell, Heritage Institute of Technology.