**Rupin Dalvi**

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1408-33 Wood Street, Toronto, Ontario, M4Y2P8

**SUMMARY**

Experienced in signal and image data analysis. 8+ years experience in MATLAB with proficiency in Python and R. Good command over machine learning libraries such as scikit-learn and TensorFlow as well as big data frameworks like pySpark. Keen to further develop data science skills and apply them in a variety of quantitative disciplines.

**WORK EXPERIENCE**

**University Health Network, Toronto (2015 – Present)**

*Research Analyst II*

* Development and testing of a prototype device (software+hardware) to analyse AF data in the catheter lab in order to guide and improve AF ablation procedures.
* Analysis of large cardiac signal and image data in order to detect and diagnose various cardiac disorders, particularly atrial fibrillation (AF).

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| **University Health Network (2011 - 2015)** |  |

*Research Analyst I*

* Analysis of large cardiac signal and image data in order to detect and diagnose various cardiac disorders, particularly atrial fibrillation (AF).

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| **Cerebral Diagnostics Canada Inc., Toronto (2010 - 2011)** |  |

*Brain Imaging Research Analyst/ Signal Analyst*

* Development and testing of software designed to provide realtime 3D cortical activity imaging based on EEG signal data.

**EDUCATION**

**Machine Learning Engineer NanoDegree (2019)**

*Udacity*

**Certificate in Mathematical Finance & Data Science (Estimated Graduation: May 2018)**

*Lantern Institute, Toronto, Canada*

**Deep Learning Foundations (2017)**

*Udacity*

**M.A.Sc. in Electrical and Computer** **Engineering (2009)**

*The University of British Columbia, Vancouver, BC, Canada*

**M.Sc. in Medical Imaging (2005)**

*University of Surrey, Guildford, Surrey, United Kingdom*

**B.E. in Electronics Engineering (2003)**

*University of Mumbai (Bombay), Mumbai (Bombay), Maharashtra, India*

**SKILLS**

**Computer Languages:** MATLAB/Octave, Python, JavaScript, intermediate SQL, basic C++

**Numerical & ML Libraries:** NumPy, SciPy, Pandas, Matplotlib, SciKit-Learn, TensorFlow, Keras

**Big Data:** pySpark

**Applications:** Word, Excel, Power Point

**Operating Systems:** Windows, Linux

**Languages:** English (fluent), Marathi (native), Hindi (native)

**SELECTED PUBLICATIONS**

* **R. Dalvi**, I. Hacihaliloglu, R. Abugharbieh. "Fast and Accurate 3D Ultrasound Volume Stitching Using Phase Symmetry and Harris Corner Detection for Orthopedic Applications". SPIE Medical Imaging (MI), San Diego-USA, 2010
* **R.Dalvi**, A.Suszko, V.S.Chauhan. " Graph Search Based Detection of Periodic Activations in Complex PeriodicSignals: Application in Atrial Fibrillation Electrograms". Canadian Conference on Electrical and Computer Engineering (CCECE), Halifax-Canada, 2015
* **R.Dalvi**, A. Suszko, V.S. Chauhan. “Identification and Annotation of Multiple Periodic Pulse Trains Using Dominant Frequency and Graph Search: Applications in Atrial Fibrillation Rotor Detection”. International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Orlando, USA, 2016
* S. Gizurarson, **R. Dalvi**, M. Das, A. C.T. Ha, A. Suszko, V. S. Chauhan, Hierarchical Schema for Identifying Focal Electrical Sources During Human Atrial Fibrillation, JACC: Clinical Electrophysiology, November 2016
* S. Kochhäuser, A. Verma, R. **Dalvi**, A.M. Suszko, P. Alipour, P. Sanders, J. Champagne, L. Macle, G.M. Nair, H. Calkins, D.J. Wilber, and V.S. Chauhan., [Spatial Relationships of Complex Fractionated Atrial Electrograms and Continuous Electrical Activity to Focal Electrical Sources: Implications for Substrate Ablation in Human Atrial Fibrillation](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=sKvCT_QAAAAJ&sortby=pubdate&citation_for_view=sKvCT_QAAAAJ:6bLC7aUMtPcC) JACC Clinical Electrophysiology, August 2017 [Epub ahead of print].
* S. Nayyar, A.M. Suszko, A. Porta-Sanchez, **R. Dalvi**, and V.S. Chauhan, Long-term cardiac resynchronization therapy reduces T-wave alternans in patients with cardiomyopathy. American Journal of Physiology-Heart and Circulatory Physiology, Under Review

**PATENTS**

CA2942904A1: System And Method For Focal Source Identification, Inventor(s): Vijay S. Chauhan, Sigfus Gizurarson, **Rupin Haily Dalvi**, Current Assignee: University Health Network (Priority date: 2014-03-31)

**REFERENCES**

References available upon request.