Rupin Dalvi

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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).

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).

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 Periodic Signals: 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 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.