Curriculum Vitae of Rituka Jaiswal, Pursuing PhD, University Of Stavanger, Norway

Email: rituka.jaiswal@uis.no

Field Of Interest:

Artificial Intelligence, Programming, Smart Grid, Graph Algorithms, Renewable Energy, Electric Vehicles, Healthcare

Software Projects: https://github.com/ritukajaiswal

Research works: https://scholar.google.com/rituka jaiswal

Work Experience:

PhD : Computer Science, University Of Stavanger, Norway (July 2018 - Present)

- Research on Artificial intelligence based techniques for Smart Grid power management and power demand balance.
- Research on household level power consumption forecasting and demand response management using smart metre data.
- Research on Graph Theory optimization algorithms for optimal design of wind farm collector systems for renewable resource integration in Smart Grid.
- Research on real-time smart metre data analysis with Edge/Fog Computing for minimising the application response time.
- Publication in peer reviewed International conferences and journals on the mentioned research works.

Senior Software Developer II: R Systems International Limited, India (Nov 2016 - Jan 2018)

- Tuner Network device driver implementation and Linux kernel configuration for adding Set Top Box (STB) devices.

Senior Software Developer: Samsung R&D India Pvt. Limited, India (Nov 2011 - Sep 2016)

- Resolved critical issues of memory corruption and application crash bugs in Set Top box application.
- Implementation of tuner, audio and video device drivers.
- Responsible for complete code restructuring of the application.
- Implemented STB booting time optimization to achieve minimum time required for the application launch.
- Implemented Doxygen tool for implementing coding guidelines and Prevent tool for resolving memory leak issues in C-language application.
- Implemented multithreading to achieve performance in the application run time.
- Implemented broadcom board bring-up by configuring the General Purpose Input Output (GPIO) pins using broadcom schematic and datasheet.

Software Engineer Intern: Sapient Nitro pvt. Limited, India (Jan 2011 - July 2011)

- Developed front end of an e-commerce website using JSP and Javascript.

Leadership Potential and Awards:

- Advocate position for 2020 and 2021 of N2Women , a community of researchers in the field of networking and communications. N2Women encourages diversity and aims at fostering connections among under-represented women in this computing sub-field.
- Co-supervised three master students for the completion of thesis in machine learning in Smart Grid research topics.
- Session chairman at the International Conference on Electrical, Computer, Communications and Mechatronics Engineering, and received certificate for the same.
- Best presentation certificate and award for a conference paper on applications of Artificial Intelligence.
- Presented a poster talk in Norwegian Artificial Intelligence Research Consortium (NORA) conference at the University Of Bergen, Norway. Member of NORA startup and NORA research school. Actively engaged in NORA research activities.

Selected Publications:

- Jaiswal, Rituka, Reggie Davidrajuh, and Chunming Rong. 2020. "Fog Computing for Realizing Smart Neighborhoods in Smart Grids" *Computers* 9, no. 3: 76. https://doi.org/10.3390/computers9030076
- Optimal Design of Wind Farm Collector System using a Novel Steiner Spanning Tree, https://ojs.bibsys.no/index.php/NIK/article/view/927
- R. Jaiswal, A. Chakravorty and C. Rong, "Distributed Fog Computing Architecture for Real-Time Anomaly Detection in Smart Meter Data," *2020 IEEE Sixth International Conference on Big Data Computing Service and Applications (BigDataService)*, 2020, pp. 1-8, doi: 10.1109/BigDataService49289.2020.00009.
- Rituka Jaiswal, Reggie Davidrajuh, and S. M. Wondimagegnehu. 2021. Fog Computing for Efficient Predictive Analysis in Smart Grids. Proceedings of the International Conference on Artificial Intelligence and its Applications. Association for Computing Machinery, New York, NY, USA, Article 14, 1–6. DOI:https://doi.org/10.1145/3487923.3487937
- Anomaly Detection in Smart Meter Data for Preventing Potential Smart Grid Imbalance(selected in AICCC, 2021, Kyoto, Japan and publishing soon). Copy available on Github.
- R. Jaiswal and R. Davidrajuh, "A Simple Algorithm for finding Steiner Spanning Trees," 2021 International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), 2021, pp. 1-5, doi: 10.1109/ICECCME52200.2021.9591017.

- PhD thesis on “Tools and Methodologies for Power Management in Smart Grids” will be submitted on 1 March, 2022. Copy available on Github.

Website: https://ritukajaiswal.github.io/

Contribution to multi author papers

- Made more than 90% contribution to all of my research papers. The role of co authors was formal analysis, structuring and quality control.

Education:

Degree	**University**	**Year**
PhD. Computer Science	University Of Stavanger, Norway	2018-2022(June, 2022 end)
Masters Of Computer Applications	MNNIT, Allahabad, India	2008-2011
Bachelors Of Science(Physics, Electronics)	Ewing Christian College, India	2004-2007

Co-curricular activities:

- Volunteered for creating awareness of women equality in Lean-in women network in India and Norway.
- Mentored women in my network to be equally capable to their male peers.
- Mentored junior software engineers for soft skills and project training in Samsung.
- Participating in the Pint of Science global science festival as a speaker to spread awareness of science among the common community of Stavanger, Norway.