Ritesh Sur Chowdhury

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Education

2018 – 2022 **B.E., Electronics and Telecommunication Engineering Department, Jadavpur University**
◇ **GPA:** *9.61*

Entrance Examination

2022 **Graduate Aptitude Test in Engineering (GATE)**
◇ **Subject:** *Electronics and Communication Engineering*
All India Rank: 59 out of 54292 candidates, **Marks:** 63.33/100, **GATE score:** 829/1000

Employment History

2022 – Present FSM System Test (FST), Qualcomm India Private Limited (QIPL).
◇ **Engineer** *(December,2023 - Present)*
◇ **Associate Engineer** *(July,2022 - December,2023)*
Job Profile: *5G system testing (Sub-6 RF), Automation for 5G system testing (Python)*

Awards and Achievements

2023 **Impact Award**
◇ *Associated with Qualcomm*
Recognized by Shashi Reddy, VP of Engineering
"Purposeful Innovation, Passionate Execution, Collaborative Community and Unquestioned Integrity"

Research Publications

* indicates Joint first authorship.

Journal Articles

1. S. Bose*, **R. S. Chowdhury***, D. Pal, S. Bose, B. Banerjee, and S. Chaudhuri, "Multiscale probability map guided index pooling with attention-based learning for road and building segmentation," *arXiv preprint arXiv:2302.09411*, 2023.
2. S. Bose*, **R. S. Chowdhury***, R. Das, and U. Maulik, "Dense dilated deep multiscale supervised u-network for biomedical image segmentation," *Computers in Biology and Medicine*, vol. 143, p. 105 274, 2022.
3. R. Das*, S. Bose*, **R. S. Chowdhury**, and U. Maulik, "Dense dilated multi-scale supervised attention-guided network for histopathology image segmentation," *Computers in Biology and Medicine*, p. 107 182, 2023.
4. **R. S. Chowdhury**, J. K. Sadhu, C. Thakur, and S. Chattopadhyay, "Performance analysis and optimization of a hybrid tsr–psr protocol for af, df and hybrid af–df relaying under weibull fading," *Telecommunication Systems*, vol. 82, no. 1, pp. 61–90, 2023.

Conference Proceedings

1. S. Ghosh, S. Bose, **R. S. Chowdhury**, A. Konar, and A. K. Nagar, "Decoding the creative ability of subjects from aesthetic quality assessment using dual convolution induced capsule network," in *2022 IEEE Symposium Series on Computational Intelligence (SSCI)*, IEEE, 2022, pp. 1319–1326.
2. J. Jana, S. Tripathi, **R. S. Chowdhury**, A. Bhattacharya, and J. Bhaumik, "An area efficient vlsi architecture for 1-d and 2-d discrete wavelet transform (dwt) and inverse discrete wavelet transform (idwt)," in *2021 Devices for Integrated Circuit (DevIC)*, IEEE, 2021, pp. 378–382.

Book Chapters

1. J. Jana, S. Tripathi, A. Bhattacharya, **R. S. Chowdhury**, D. Ranjan, and J. Bhaumik, "A cost-effective tracking and health monitoring system for suspected covid-19 patient in quarantine," in *Microelectronics, Circuits and Systems: Select Proceedings of Micro2021*, Springer, 2023, pp. 569–579.
2. J. Jana, S. Tripathi, A. Bhattacharya, *et al.*, "An android-application-controlled car for human safety against covid-19," in *Internet of Things and Its Applications: Select Proceedings of ICIA 2020*, Springer, 2022, pp. 3–12.

Research Works Under Review

1. **Attention Induced Dual Convolutional-Capsule Network (AIDC-CN): A Deep Learning Framework for Motor Imagery Classification**
   Authors: ***Ritesh Sur Chowdhury****, *Shirsha Bose**, *Sayantani Ghosh and Amit Konar*
   Submitted Journal: *Computers in Biology and Medicine*
2. **Improved DWT and IDWT Architectures for Image Compression**
   Authors: ***Ritesh Sur Chowdhury***, *Jhilam Jana, Sayan Tripathi, and Jaydeb Bhaumik*
   Submitted Journal: *Microprocessors and Microsystems*
3. **Design of Adder-Subtractor based Compact and Power Efficient DWT and IDWT Architectures**
   Authors: *Jhilam Jana,* ***Ritesh Sur Chowdhury***, *Sayan Tripathi, and Jaydeb Bhaumik*
   Submitted Journal: *Journal of Real-Time Image Processing*

Github Repository

1. **Attention Induced Dual Convolutional-Capsule Network (AIDC-CN): A Deep Learning Framework for Motor Imagery Classification:** https://github.com/RiteshSurChowdhury/AIDC-CN
2. **MultiScale Probability Map guided Index Pooling with Attention-based learning for Road and Building Segmentation:** https://github.com/shirshabose/MSSDMPA-Net
3. **Dense Dilated Multi-Scale Supervised Attention-Guided Network for histopathology image segmentation:** https://github.com/shirshabose/D2MSA-Net
4. **Dense Dilated Deep Multiscale Supervised U-Network for biomedical image segmentation:** https://github.com/shirshabose/D3MSUNET

Skills

Languages	English, Hindi, Bengali.
Programming Languages	C, Python, Matlab.
Programming Platforms	Colab, Jupiter Notebook, Python IDLE, Matlab.
Machine Learning Framework	PyTorch, TensorFlow.
Hardware Languages	Verilog, VHDL.

Skills (continued)

Hardware Design Suite	Vivado, Xilinx ISE.
Miscellaneous	Academic research, LaTeX typesetting.

Certification

2020 **Swadeshi Microprocessor Challenge**. Secured a position in Quarter Final in Swadeshi Microprocessor Challenge, organized by MeitY.

Hobbies

Playing chess, solving puzzles.