

Najeeb Khan

University of Saskatchewan,
Department of Computer Science,
Room 176, Thorvaldson Building,
Saskatoon, Saskatchewan, S7N 5C9

najeeb.khan@usask.ca
www.najeebk.com
linkedin.com/in/najeeb-khan

EXPERIENCE

- **Calian SED, Canada** Feb 2018 – present
 - Machine Learning and Optimization Specialist** March 2020 – present
 - Develop Calian's AI strategy, generate internal support and seek external projects
 - Build a team of machine learning engineers and provide technical mentorship
 - Oversee the development of production-grade machine learning systems
 - Contribute to SatCom resource planning and management projects
 - Software Developer** Feb 2018 – Feb 2020
 - Contributed to the design, development and testing of Inmarsat Satellite Spectrum Monitoring System.
 - Design of real-time dynamic resource optimization algorithms for GEO and MEO satellite constellations
- **Co-Instructor at University of Saskatchewan** Jan – May 2020
CMPT 898 Special Topics: Deep Learning and Applications
 - Contributed to curriculum development as this was a new course
 - Contributed to setting the assignments and mid-term
 - Prepared and delivered lectures (co-taught with Prof. Stavness)
 - All other logistics were handled by Prof. Stavness (office hours etc.)
- **Teaching Assistant at University of Saskatchewan** Jan 2016 – May 2018
Created and delivered weekly tutorial lectures for the following courses:
 - CMPT 270 - Developing Object-Oriented Systems Fall 2017
 - CMPT 260 - Mathematical Logic and Computing Summer 2017
 - CMPT 820 - Machine Learning Fall 2016Marked weekly assignments for the following course:
 - CMPT 280 - Intermediate Data Structures and Algorithms Winter 2016-2018
- **Research Assistant at University of Ulsan, S. Korea** Mar 2013 – Aug 2015
Main responsibilities included writing research software for statistical signal processing and delivering weekly seminars to the speech signal processing lab members.

EDUCATION

- **Ph.D. Candidate in Computer Science,** Started Sept 2015
University of Saskatchewan, Canada.
 - Thesis: *Regularization and compression of deep neural networks*
 - Advisor: Ian Stavness, Ph.D.
- **M.S. Computer Engineering,** March 2013 – Aug 2015.
University of Ulsan, South Korea.
 - Thesis: *Singing Voice Synthesis Using Hidden Markov Model Based Text To Speech Synthesis System*
- **B.S. Electronic Engineering,** Sept 2008 – June 2012.
International Islamic University, Pakistan.
 - Thesis: *Implementation of Adaptive Filters on TMS320C6713 DSK*

PEER
REVIEWED
PUBLICATIONS

1. N. Khan and I. Stavness, "Sparseout: controlling sparsity in deep networks." *32nd Canadian Conference on Artificial Intelligence* (2019).
2. N. Khan, J. Shah and I. Stavness, "Bridgeout: stochastic bridge regularization for deep neural networks." *IEEE Access* (2018).
3. N. Khan and I. Stavness, "Prediction of muscle activations for reaching movements using deep neural networks." *American Society of Biomechanics* (2017).
4. N. Khan and J. Lee, "Optimal state duration assignment in hidden Markov model-based text-to-speech synthesis system." *Electronics Letters* (2015).
5. N. Khan and J. Lee, "HMM based duration control for Singing TTS." *Lecture Notes in Electrical Engineering* (2015).
6. N. Khan and J. Lee, "Singing Voice Synthesis using HMM based TTS and MusicXML." *Journal of the Korean Society of Computer and Information* (2015).
7. N. Khan and J. Lee, "Development of a Music Score Editor based on MusicXML." *Journal of the Korean Society of Computer and Information* (2014).

TALKS

- "Hacking Neural Nets with PyTorch," Universiti Kuala Lumpur, Malaysia, November 6, 2019.
- "Reinforcement Learning," Young Researchers Conference in Mathematics and Statistics, Canada, June 8, 2017. [[googl/WbqSGU](https://www.google.com/search?q=googl/WbqSGU)]
- "Deep Neural Networks: Introduction, Architectures and Implementations," Dept. of CS, University of Saskatchewan, Canada, November 29, 2016. [[googl/EaygQp](https://www.google.com/search?q=googl/EaygQp)]
- "Text-to-Speech Synthesis Systems: An Overview," Dept. of Electrical Engineering, University of Ulsan, South Korea, December 6, 2013. [[googl/iebOnA](https://www.google.com/search?q=googl/iebOnA)]