Salman Mohamadi | Curriculum Vitae

West Virginia University, Department of Computer Science and Electrical Engineering

Sm0224@mix.wvu.edu, Salmaneda89@gmail.com

Education

- **Ph.D., Graduate Research Assistant** **2019–Present**
  West Virginia University Morgantown, WV, USA
  - **Major: Computer Science**
    - **Thesis: Active Uncertainty Representation Learning**
  - Total GPA: 4/4
  - Under the supervision of **Dr. Adjeroh and Dr. Doretto**

Research Interests

- **General:** Machine Learning (ML), Deep Learning (DL), Computer Vision, and Their application with Bioinformatics
- **Specific:** Uncertainty Representation in Deep Learning, Self-Supervised Learning, and Active Learning
- **More Specific:** Getting machines to learn **hierarchical representation of action plans** (as opposed to hierarchical representation of perception which is in part solved by deep learning)

Selected Publications

- **Deep GAN-based Cross-Spectral Cross-Resolution Iris Recognition**
  IEEE Transactions on Biometrics, Behavior, and Identity Science (T-BIOM); August, 2021
- **Deep Active Ensemble Sampling**
  Accepted to Asian Conference on Computer Vision (ACCV, 2022)
- **FUSSL: Fuzzy Uncertain Self-Supervised Learning**
  Accepted to EEE/CVF Winter Conference on Applications of Computer Vision (WACV, 2022)
- **GUESS: Generative Uncertainty Ensemble For Self-Supervision**
  To be submitted to IEEE transaction of Image Processing
- **Contemplating on the Evolution of Loss Functions for Self-Supervised Learning**
  To be submitted to IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)
- **ARIMA-GARCH Modeling For Epileptic Seizure Prediction**
  IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2017, New Orleans, LA, USA
- **ARIMA-GARCH, A Statistical Modeling For Epileptic Seizure Prediction (extended version of**

ICASSP 2017)
26th Biomedical Engineering Conference, World Academy of Science, Engineering and Technology, 2017, London, United Kingdom

- **A New Framework For Spatial Modeling And Synthesis of Genomic Sequences,**
  IEEE International Conference on Bioinformatics and Biomedicine, 2020, South Korea
- **An Information-Theoretic Framework for Identifying Age-Related Genes UsingHuman Dermal Fibroblast Transcriptome Data**
  IEEE International Conference on Bioinformatics and Biomedicine, 2021, Houston, TX, USA
- **Human Age Estimation from Gene Expression Data Using Artificial Neural Networks**
  IEEE International Conference on Bioinformatics and Biomedicine, 2021, Houston, TX, USA
- **Deep Bayesian Active Learning, A Brief Survey on Recent Advances**
  arXiv preprint arXiv:2012.08044,2021
- **Detection and Statistical Modeling of Birth-Death Anomaly,**
  arXiv preprint arXiv:1906.11788, 2019.

Selected Academic Projects

- **Approximate Thompson Sampling for Active Learning (2021)**
- **Uncertainty Representation in Loss Function and Architectures for Self-Supervised Learning(2022)**
- **Beyond Fundamental Limits of Single Supervisory Signal for Self Supervised Learning (2022)**
- **Long-Term Epileptic Seizure Prediction (2016)**
- **A deep Learning Approach for 3-D Image Reconstruction Using Clinical CT and MRI Images (2016)**
- **Deep GAN-based Cross-Spectral Cross-Resolution Iris Recognition, CITeR (NSF) Project (2019-2021)**
- **A Neural Network Based Approach for Gene Expression Based Age Prediction, CITeR (NSF) project (2020-2021)**
- **A survey on Deep Bayesian Active Learning(2020-2021)**
- **Statistical Analysis on Covid-19 Genome Sequences, and Sequencing Accuracy Modification, NSF project, (2020-2021)**
- **Multi-Scale Integrative Approach to Digital Health, NSF Project (2020- Present)**

Teaching Experience

- Teaching Assistant for **Statistical Wavelet Processing** Graduate Course **Spring 2018**
  - Instructor: Dr. Amindavar **AUT**
- Teaching Assistant for **Statistical Signal Processing** Graduate Course **Fall 2017**
  - Instructor: Dr. Amindavar **AUT**
- Teaching Assistant for **Advance Digital Communcation** Graduate Course **Fall 2017**
  - Instructor: Dr. Amindavar **AUT**
- Teaching Assistant for **Stochastic Process** Graduate Course **Fall 2017**
  - Instructor: Dr. Amindavar **AUT**

- Teaching Assistant for **Statistical Wavelet Processing** Graduate Course **Spring 2017**
  - Instructor: Dr. Amindavar **AUT**
- Teaching Assistant for **Digital Communication** Undergraduate Course **Spring 2016**
  - Instructor: Dr. Amindavar **AUT**
- Teaching Assistant for **Statistical Signal Processing** Graduate Course **Spring 2016**
  - Instructor: Dr. Amindavar **AUT**

Computer skills

Programming Languages
- Matlab
- Python
- C++
- R

Software tools
- Tensorflow
- PyTorch
- LaTeX
- Gnuradio

O.S and General Softwares
- Microsoft Windows
- Linux
- Microsoft Office

References

- Nasser M. Nasrabadi, PhD, Fellow of IEEE
  - Professor, West Virginia University, School of Computer Science and Electrical Engineering, Director of Deep Learning Laboratory
  - **nasser.nasrabadi@mail.wvu.edu**
- Donald Adjeroh, PhD
  - Professor, West Virginia University, School of Computer Science and Electrical Engineering, Head of Department of Computer Science
  - **donald.adjeroh@mail.wvu.edu**
- Gianfranco Doretto
  - Professor, West Virginia University, School of Computer Science and Electrical Engineering
  - **gianfranco.doretto@mail.wvu.edu**