Amir Namavar Jahromi

20 Gustav Crescent, North York
Toronto, Ontario, Canada
Mobile : +1-647-809-5122

Email : anamavar@uoguelph.ca
https://www.linkedin.com/in/anamavarjahromi/

Highlights

Data scientist with experience in cyber-security (malware detection, fraud detection, and power system attack detection and prediction) medical data (end-stage mortality prediction) analysis.

Technical Skills: C/C++, C#, Python, R, Matlab, Weka, Neural Networks (MLP, ELM, SOM, ...) Deep Learning (stack autoencoder, CNN, LSTM), ensemble methods (GBM, Random Forest, Adaboost, prediction Market, ...), Keras/TensorFlow, LaTeX

Education

Academic Degrees

- **(In progress) Ph.D. in Computer Engineering**, Artificial Intelligence, Shiraz University, Shiraz, Iran.
- **M.Sc. in Information Technology**, Multimedia Systems, Tehran Polytechnic, Tehran, Iran, 2013.
- **B.Sc. in Information Technology**, University of Sistan & Balouchestan, Zahedan, Iran, 2010.

Experience

- **AI Researcher** — University of Guelph
  Guelph, ON, Canada — *June 2019 – present*
  - Working on power system/smart grid cyber-security attack detection and prediction using machine learning techniques.

- **Cyber-Security Team Manager** — Amnpajooh Noavaran Fars
  Shiraz, Fars, Iran — *June 2015 – May 2019*
  - Performed penetration test of websites and Windows/Android/IOS application (Management)
  - Designed and built a port and vulnerability scanning tool over a wide range of IPs and ports using C# (Management and design)
  - Certified to implement Information Security Management System (ISMS- ISO/IEC 27001:2013)
  - Lecturer of ISMS basic/advanced
  - Project management (used MS Project, Jira, MS Team Foundation)

- **Cyber-Security Researcher** — Cert of Shiraz University
  Shiraz, Fars, Iran — *February 2014 – May 2019*
  - Researched on the latest cyber-security vulnerabilities
  - Scanned networks/applications to find cyber-security issues
  - Researcher and AI programmer on the Iranian anti-virus project (worked with Matlab, Python, and C++)

- **AI Researcher** — Shiraz University of Medical Science
  Shiraz, Fars, Iran — *January 2016 – May 2017*

- Design and implementation of a system for Pre-Transplant Mortality Prediction of Patients with End-Stage Liver Disease.

- **R&D Team Leader** FANA
  Shiraz, Fars, Iran *June 2014 – October 2014*
  - Worked on the transportation application for people with disabilities, including parking slots, taxi, and public transports.

- **Teaching Experiences** Islamic Azad University &
  Shiraz, Fars, Iran *University of Applied Science and Technology*

Projects and Achievements

- **Power-system and smart grid fault and attack detection and prediction**, using machine learning techniques to detect and predict fault and cyber-security attacks in power-system and smart grid networks.
- **Stacked LSTM**: proposed the pre-training for stacked LSTM.
- **Modified Extreme Learning Machine (ELM)**: proposed a new ELM architecture to handle partially stationary data like image, text, and speech.
- **Malware detection** used deep neural networks, including stacked LSTM and CNN for malware detection.
- **Image processing** used deep neural networks and the proposed ELM for object detection problem.
- **Fraud detection**, compared traditional machine learning techniques to deep neural networks on the highly imbalanced datasets of fraud detection.
- **Protein family detection (bioinformatics)**, used deep neural networks and NLP techniques for protein family detection.
- **Adversarial malware detection**, using GAN to generate new signatures of potentially future samples.
- **Online courses**: attended in Coursera online courses for machine learning purpose.
- **Speech Recognition System**, on Farsi, using HMM model.
- **Kaggle competition**, achieved a bronze medal.
- **Iran National Computer Olympiad**: attended in the last of Iranian National Olympiad.

Publication

1. A. Namavar Jahromi, S. Hashemi, A. Dehghantanha, K.-K. R. Choo, D. E. Newton, and R. M. Parizi, *An Improved Two-Hidden-Layer Extreme Learning Machine for Malware Hunting with Raw Features*, Computers & Security. [revision review]
2. A. Namavar Jahromi, S. Hashemi, A. Dehghantanha, R. M. Parizi, and K.-K. R. Choo, *An Enhanced Stacked LSTM Method with no Random Initialization for Malware Threat Hunting in Safety and Time-Critical Systems*, IEEE Transactions on Emerging Topics in Computational Intelligence, 2019. [inpress]
3. K. Bagheri Lankarani, S. Hashemi, B. Honarvar, S. Famouri, and A. Namavar Jahromi, *Pre-Transplant Mortality Prediction of Patients with End-Stage Liver Disease: A Comparative Study Between Machine Learning Methods and The Traditional MELD Score, in 7th International Tehran Hepatitis Conference*, (Tehran, Iran), Hepatitis Monthly, 2017.

4. A. Namavar Jahromi and S. Hashemi, *A Deep Super-Vector Based Representation for Clustering*, in 2017 9th International Conference on Information and Knowledge Technology (IKT), pp. 124-128, IEEE, 2017.
5. A. Namavar Jahromi and M. M. Homayounpour, *Emotions from Farsi texts with mutual-word-counting and word-spotting*, in The 16th CSI International Symposium on Artificial Intelligence and Signal Processing (AISP 2012), pp. 339-342, IEEE, 2012.