**Lista si sinteza lucrarilor publicate**

* Proiectarea unei arhitecturi eficiente de grafuri tensoriale orientate aciclice pentru analiza si inferenta scenelor artificiale (GUI) odata cu realizarea unei baze de date publice de imagini cu artefacte vizuale GUI adnotate pentru antrenare modelelor neurale. Totodata aceste arhitecturi specifice invatarii profunde automate aplicata in imagistica au fost portate cu succes din zona inferentei scenelor artificiale (GUI) in zona inferntei scenelor reale prin realizarea a 3 sisteme utilizate in productie in domeniul medical – mentionam sistemul de suport in screening-ul cancerului de col uterin realizat in colaborare cu Institutul Oncologic “Ion Chiricuta” - precum si in domeniul securitatii si sigurantei. Mentionam totodata obtinerea a doua grant-uri de cercetare, dezvoltare si inovare in domeniul Inteligentei Artificiale sustinute in mare parte de aceste cercetari doctorale.
  1. A. I. Damian and N. Tapus, “Model Architecture for Automatic Translation and Migration of Legacy Applications to Cloud Computing Environments,” 2017, doi: 10.1109/CSCS.2017.88.
  2. A. I. Damian, A. Purdila, and N. Tapus, “Cloudifier virtual apps: Virtual desktop predictive analytics apps environment based on GPU computing framework,” 2017, doi: 10.1109/ICCP.2017.8116994
  3. A. I. Damian, L. Piciu, A. Purdila, and N. Tapus, “Cloudifiernet - Deep vision models for artificial image processing,” Procedia Computer Science. pp. 720–728, 2019, doi: https://doi.org/10.1016/j.procs.2019.12.043.
* Cercetarea si dezvoltarea de componente specifice grafurilor neurale cu aplicativitate multi-disciplinara ce a permis migrarea de module si tehnici din zona analizei scenelor vizuale (artificiale sau naturale) in zona analizei predictive. Aceste cercetari de dezvoltari experimentale au fost productizate in cadrul Lummetry.AI si in particular in seria de produse si servicii de analiza predictiva SEER. Dintre abordarile specifice invatarii automate profunde propuse cu caracter inter-disciplinar mentionam inovarea reprezentata de modulul neural *Multi Gated Unit (MGU)* destinat reducerii timpului si resurselor necesare determinarii topologiilor optime de grafuri neurale, abordare cu potential impact inclusiv in reducerea amprentei de carbon specifice proceselor costisitoare de antrenare a modelelor neurale.
  1. A. I. Damian, L. Piciu, and N. Tapus, “A view on automated neural graph topology generation and a viable direction of innovation,” in Proceedings - RoEduNet IEEE International Conference, 2020, vol. 2020-Decem, doi: 10.1109/RoEduNet51892.2020.9324853
  2. A. I. Damian, L. Piciu, C. Marinescu and N. Tapus, "ProVe - Self-supervised pipeline for automated product replacement and cold-starting based on neural language models," 2021 23rd International Conference on Control Systems and Computer Science (CSCS), 2021, pp. 98-105, doi: 10.1109/CSCS52396.2021.00024.
  3. A. Damian, L. Piciu, S. Turlea and N. Tapus, "Advanced Customer Activity Prediction Based on Deep Hierarchic Encoder-Decoders," 2019 22nd International Conference on Control Systems and Computer Science (CSCS), 2019, pp. 403-409, doi: 10.1109/CSCS.2019.00074.
  4. Simion-Constantinescu, A., Damian, A. I., Ţăpuş, N., Piciu, L. G., Purdilă, A., & Dumitrescu, B. (2018, September). Deep Neural Pipeline for Churn Prediction. In 2018 17th RoEduNet Conference: Networking in Education and Research (RoEduNet) (pp. 1-7). IEEE
  5. L. Piciu, A. Damian, N. Tapus, A. Simion-Constantinescu and B. Dumitrescu, "Deep recommender engine based on efficient product embeddings neural pipeline," 2018 17th RoEduNet Conference: Networking in Education and Research (RoEduNet), 2018, pp. 1-6, doi: 10.1109/ROEDUNET.2018.8514141.

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