KRYSTIAN SAFJAN

Researcher with system architecture, and Machine Learning expertise; 12Y of experience

phone: (+48) 728-361-374
ksafjan@gmail.com

mailing address:
ul. Semaforowa 61/8,
52-115 Wroclaw, Poland

EDUCATION

1999 – 2004 M.Sc.	Wrocław University of Technology, Electronics, Digital Signal Processing, Thesis in field of Computer Vision: "Face image based person recognition"
2003 – 2008 M.Sc.	University of Wrocław, Social Science, Thesis in fields of Communication and Data Minig: "Characteristics of Internet Mediated relation establishment"

PROFESSIONAL EXPERIENCE

2018 - now **System Architect, Nokia**
Specifying future architecture and architectural requirements for Cloud RAN with focus on virtualization, containerization and enablers for Machine Learning.

2017 - 2018 **Data Scientist, Web-app developer, Entrepreneur**
Cleaning data, extracting features and selecting best algorithms for NLP-based document classification service. Prototype of e2e ML pipeline for a client Wilabs. Design and implementation of web applications (Django, Flask); Python programming, DevOps incl. containers and their orchestration, testing and QA.

2015 - 2017 **5G Senior Research Engineer, Nokia**
Leading "RAN Functions, Architecture, and Integration" work package in EU founded project mmMAGIC by driving technical work on architectural topics and coordinating work of 10 partners from industry, operators, and academia. mm-wave system reliability Machine Learning based enhancements based on historical data. Predict and mitigate blockages and interference for access and backhaul.

2007 - 2015 **Radio Research Engineer, Nokia Siemens Networks**
Development, evaluation of concepts by modeling and simulations in MATLAB for interference mitigation in macro+HeNB deployment in LTE networks. Support 3GPP delegates by providing results and explanations of performed studies. Evaluation of LTE-A as IMT-A candidate technology including system and model calibration.

2006 – 2007 **Software and System Architect, Siemens**
Research and development of system level simulator LTE; modeling of radio channel access methods (MIMO, Fixed GoB, SDMA), design of MIMO capable schedulers; software quality assurance; work with VCS; technical documentation development; simulator performance optimization, software testing.

DATA SCIENCE EXPERIENCE

Prototype of NLP service	Cleaning data, extracting features selecting best algorithms for NLP-based assessment of document creativity. Prototype of e2e ML pipeline for the client.
ML-RRM for mm-wave	Reinforcement learning solution for blockage prediction and interference minimization where network plays a game and gains score by optimizing experience of all users in the scene. Done as part of research in Nokia-Bell labs.
Side projects	Machine translation using sequence-to-sequence model, geometric deep learning for identifying groups of similar users in social network. Code for some of side projects is available on github: https://github.com/izikeros.
Kaggle competitions	Active participation in Kaggle community, keeping eye on the trends, learning from the best Kagglers to design own solutions and compete with others e.g. recipe to cuisine mapping.

LEADERSHIP EXPERIENCE

Task lead, Work package lead	Leading "RAN Functions, Architecture, and Integration" work package, member of Project Management Team in mmMAGIC EU project. Leading a group of 12 persons in WINNER+ EU project "simulations" task. **Gained Experience:** Planning the utilization of research resources. Prompt plan revisions due to dynamic situations (e.g. partners leaving the project). Coordination of multi-company work on a public deliverable document; journal paper. Effort estimation and workload balancing and alignment. Communicating with other task- and work package-leaders to harmonize the effort. Task delegation to task leaders.

OTHER SKILLS

- Teaching/mentoring experience: NSN Lecturer at Wroclaw University of Technology (WUT), Teaching Assistant at Faculty of Electronics WUT; Serving as advisor for Masters students;
- Able to look at things from various perspectives, ability to see the bigger picture;
- Eager to explore unknown;
- Effective communication skills;
- Empathy and self-awareness.

PUBLICATION, PATENT COUNT, CERTIFICATIONS

4+ IPRs, 11 Conference papers, Chapters in 3 books, 1 Journal Paper - details on google scholar
"Neural Networks and Deep Learning" certificate from deeplearning.ai (2TMZFJMHKZF)

LANGUAGES

English: Advanced Reading, Writing, Speaking and Listening
Spanish, German, Russian: Novice