

Krystian Safjan

DATA SCIENTIST · RESEARCHER

✉ ksafjan@gmail.com | 🏠 safjan.com | 📧 izikeros | 📺 krystiansafjan | 🎓 Google Scholar

Summary

I'm a Data Scientist with 12 years of experience in research. I'm solving real business problems using machine learning techniques mainly from the field of NLP. I build models, extract the information from structured and unstructured text data produced either by humans or machines. In the past, as a telecom professional, I was developing 4G and 5G mobile networks architecture, radio resource management and mm-wave systems, where I mastered ability to understand, model and simulate complex systems. I worked and lead the work in collaborative, EU funded projects. Python is my programming language of choice.

Professional Experience

Data Scientist

NOKIA

Feb. 2019 - PRESENT

- Built system for BTS log classification.
- Making sense of unstructured, inconsistent data.
- Working with human or machine produced text data using different approaches like: sentence clustering, message simplification, classification algorithms.
- Managing experiments, results and models.
- Presentations of project outcome and plans tailored to audience.

System Architect

NOKIA

Sep. 2018 - Feb. 2019

- Author of "AI architectural enablers" chapter in Nokia Cloud RAN BTS Reference Architecture specification.
- Coordination of work on Nokia Cloud RAN BTS Reference Architecture specification.

Data Scientist, Web-app developer, Entrepreneur

LADATA

Apr. 2017 - Aug. 2018

- Cleaned the textual data, extracted features, selected best-performing algorithms for the NLP-based document classification service.
- Prototype of e2e ML pipeline for a client Wilabs.
- Design and implementation of web applications (Django, Flask); Python programming and testing.
- DevOps including containers and their orchestration, CI and QA.

5G Senior Research Engineer

NOKIA

2015 - 2017

- Developing mm-wave system reliability Machine Learning based enhancements based on historical data. Predict and mitigate blockages and interference for access and backhaul.
- Leading "RAN Functions, Architecture, and Integration" work package in EU funded project mmMAGIC by driving technical work on architectural topics and coordinating work of 10 partners from industry, operators, and academia.

Radio Research Engineer

NOKIA SIEMENS NETWORKS

2007 - 2015

- Development, evaluation of concepts by modeling and simulations in MATLAB for interference mitigation in macro + home base station (HeNB) deployment in LTE networks.
- Support 3GPP standardization delegates by providing results and explanations of performed studies.
- Evaluation of LTE-A as IMT-A candidate technology including system and model calibration.

Software and System Architect

SIEMENS

2006 - 2007

- Research and development of LTE system level simulator, modeling of radio channel access methods, design schedulers.
- Software quality assurance, work with VCS, technical documentation development, simulator performance optimization, software testing.

Data Science Experience

LOG CLASSIFICATION

2019

- Choosing efficient representation for log data.
- Engineering features for log labeling using log metadata.
- Building project environment for effective collaboration, experiment and model management.

DOCUMENT CLASSIFICATION - NLP SERVICE

2017

- Cleaning data, extracting features selecting best algorithms for NLP-based assessment of document creativity.
- Prototype of e2e ML pipeline for the client.

- 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

2017 - PRESENT

- Machine translation using sequence-to-sequence model.
- More of side projects are available on github: <https://github.com/iziker0s>.

KAGGLE COMPETITIONS

2016 - present

- 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

Technical Lead of ML project

NOKIA

Feb 2019 - PRESENT

- Technical lead of 5-person project team.
- Setting research and experimenting directions, experiment and task prioritization.
- Guiding less experienced team members.
- Challenging methods and results to build solutions with confidence of being correct.

Work package lead, Project Management Team Member in EU funded project

MMAGIC, WINNER+ PROJECT

2016-2017

- 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.

Education

Wroclaw University of Technology, Digital Signal Processing

M.SC. IN TELECOMMUNICATIONS

Oct. 1999 - Jul. 2004

- Thesis in the field of Computer Vision: "Face image based person recognition."

University of Wroclaw, Communication

M.SC. IN SOCIAL SCIENCE

Oct. 2003 - Sep. 2008

- Thesis in fields of Communication and Data Mining: "Characteristics of Internet Mediated relation establishment - study of dating service content".

Other Skills

- Teaching/mentoring experience: Nokia Lecturer at Wroclaw University of Technology (WUT), teaching Assistant at Faculty of Electronics WUT, serving as adviser 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.