Peter Laurinec

Data Scientist · Machine Learning Engineer/Researcher

□ (+421) 904-393-588 | ✉ laurinec.peter@gmail.com | ⌂ petolau.github.io | ⬡ PetoLau | ▯ peter-laurinec-590a8a90 | 🐦 @petolauri

Highlights

- **Passionate Data Scientist**/ **ML Researcher** with **experience** in energy business (**9+ years**) and research (**5+ years**)
- **Team Leader** of AI and Revenues with product owner responsibilities
- **Master of Forecasting**. Advanced skills in **time series**/ regression analysis, **clustering** and optimization
- Researcher: **published over 10 internationally recognized research papers**
- **Technical Proficiencies:** R/RStudio/jupyter, Keras/XGBoost/LightGBM/CatBoost/h2o.ai ML frameworks, PostgreSQL, Git/GitHub, Jira/Confluence, Microsoft Office/LaTeX
- Good communication and presentation skills: **presented my work at international conferences** in San Francisco, Barcelona, Skopje, Budapest, and also on other **meet-ups/ local conferences** in Belgrade, Prague, Bratislava, Poprad, Smolenice
- Active in **open source** community: github.com/PetoLau, **writing blog** about time series data mining

Experience

PowereX j.s.a.   *Bratislava, Slovakia*

CDO - Chief Data Officer   *Sep. 2018 - PRESENT*

- **Team Lead** - of AI / Data Science (4 people), product owner (cross-teams management needed), project management
- **Revenues Assurance Lead** - reporting, monitoring, and analysis of all company products that generates revenues -> generating short/ long-term visions for enhancements
- **Forecasting pipeline** - automatic scripts for feature extraction/ feature engineering/ feature selection/ training/ validating/ testing/ ensemble learning/ evaluation of any time series with advanced machine learning methods and frameworks (*keras, xgboost, lightGBM, catboost, h2o, plumber*)
- **Aggregator** - optimization of customer's portfolio sources (consumers, producers, trading platforms etc.) with regards of actual/ forecasted System Imbalance (Regulated Electricity), and trading in Day-Ahead and Intra-Day Markets
- **Trading on short-term markets** - design of trading tactics on DayAhead and IntraDay electricity markets
- **Clustering consumers** - tool for automatic clustering of consumers for identification of new possible billing settings etc.
- **Prediction of power outages** - predictive classification task for electrical grid outages based on extreme weather data
- **Interactive dashboards** - developing and deploying statistical reporting tools/ interactive dashboards for better understanding/ visualization of all above projects (*bs4Dash, shinydashboard*)

FIIT STU, Bratislava   *Bratislava, Slovakia*

Teacher Assistant   *Sep. 2014 - Aug. 2018*

- **Teaching** procedural programming (**C**), artificial intelligence (**AI**) and knowledge discovery from databases (**KDD**)
- **Supervised** 6 bachelor's theses, 4 **master's theses** and helped to supervise 2 master's theses - various themes about clustering large/ multi-view/ heterogeneous/ multi-density/ stream/ dynamic data, interpretation of machine learning methods, ensemble learning in time series forecasting
- **Co-organization** of Big Data and Bioinformatics research seminars - many times as active speaker
- **Co-writing** of research grants for agencies as VEGA and APVV

Atos IT solutions, Bratislava *Bratislava, Slovakia*

<small>CONSULTANT</small> *May 2015 - Sep. 2015*

- **Worked** on large project that dealt with **smart grid technologies** (as smart meters) and data (as electrical energy consumption)
- **Focus** on ensemble learning for time series forecasting of energy consumption

Education

Faculty of Informatics and Information Technologies, Slovak University of Technology *Bratislava, Slovakia*

<small>PHD. IN INTELLIGENT INFORMATION SYSTEMS</small> *Sep. 2014 - Jul. 2018*

- **PhD thesis** on Improving forecasting accuracy through the influence of time series representations and clustering
- **Wrote 13 research articles with international recognition.** Some of them are available online:
    – Incremental ensemble learning for electricity load forecasting, Journal paper, IF: 1.28, **Citation count: 25**, link
    – Interpretable multiple data streams clustering with clipped streams representation for the improvement of electricity consumption forecasting, Journal paper, **IF: 2.88**, citation count: 9, link
    – Density-based unsupervised ensemble learning methods for time series forecasting of aggregated or clustered electricity consumption, Journal paper, **IF: 1.59**, citation count: 3, link
    – Another 10 journal/ conference/ workshop papers with citation count of **67** (based on scholar.google at 2020-05-16)
- **Active presentations at the international conferences** in San Francisco, Barcelona, Skopje, Prague and Poprad
- **Got** the STU Grant of Young Researchers two times in 2016 and 2017

Faculty of Mathematics, Physics and Informatics, Comenius University *Bratislava, Slovakia*

<small>BC. AND MGR. IN INSURANCE MATHEMATICS/ PROBABILITY AND MATHEMATICAL STATISTICS</small> *Sep. 2009 - Jun. 2014*

- **Bachelor thesis** on Latin squares and theirs usage in design of experiments - three-way ANOVA without interaction
- **Master thesis** on **model-based cluster analysis** solved by genetic algorithm

R's community

- **Blogging:** about **time series data mining in R**. Blog posts mainly about **forecasting** and time series representations. Contributing to aggregators as R-bloggers and R Weekly.
- **Package:** I created R package for time series representations computing called **TSrepr**. It allows more accurate and effective time series data mining. It is written in R and C++ (50/50).
- **Shiny application:** I created *shinydashboard* application for visualization of **COVID-19 spread** in the World with multiple analytic tools as comparing and clustering countries' trajectories/statistics of cases/deaths, simple extrapolations etc.
- **Active participation** at **eRum 2018** and **SatRday Belgrade 2018** conferences. Talks about **Time Series Data Mining**

Skills

Programming	**R** (Expert), SQL (Intermediate), LaTeX (Advanced)
Languages	Slovak, English, Czech, Hungarian
Sports	Running, ultra-trail, hiking, yoga, fishing
Driving license	Type B