

Pavel Senin

Data Science Software Engineer

PERSONAL SUMMARY



Looking for a mid/senior level technical management position. A goal-oriented, forward thinking researcher with excellent organizational and interpersonal skills.

EXPERIENCE



Principal Data Scientist *Sanofi*

current
Paris, France

Finding out which patients respond to treatment and why by advancing machine learning use for causal inference in RWE studies. Shortening the time for rare disease diagnostics.

Lead Data Scientist/LM 2019–2020 *Tessella WCC*

(Data Scientist, 2017–2018)
Toulouse, France

Led a GDPR compliance/artifact classification project and worked on conversational interfaces adoption with Airbus. Worked on defect root cause analysis and predictive maintenance with Schneider Electric, Liebherr-Aerospace and Airbus. Researched probability-of-defect models, worked on flight anomaly discovery and aeronautical simulations with Airbus. Supervised research program and carried the line manager role.

Data Scientist *Western Digital*

2018–2019
Irvine, California

Worked on identifying and evaluating IO-intensive computational kernels for prototyping of a new generation of non-volatile storage enabling the exploitation of wide NAND bandwidth and data locality while leveraging configurable hardware-based parallelism.

Research Associate 2016–2017 *Los Alamos National Laboratory*

(Research Technologist, 2007–2010)
PO Box 1663

Worked on high-throughput comparative microbiome analysis workflows for DOE/DOD biosurveillance program. Contributed a metagenome comparative toolkit to R&D 100 award winning EDGE platform. Participated in DOE Exascale Computing Project. Developed a fragment recruiting technique for pioneering single-cell genome sequencing.

EDUCATION



PhD, Computer Science (Software process analysis)

University of Hawai'i at Mānoa

2015

Honolulu, HI, USA

MS, Computer Science (Capstone on MCMC simulation)

University of Hawai'i at Mānoa

2007

Honolulu, HI, USA

MS, (ABD) Appl. Mathematics (Num. optimization)

Rostov State University (SFedU)

2002

Rostov-na-Donu, Russia

SELECTED PUBLICATIONS

[scholar profile](#)

Meta-omics Provides Insights into the Impact of Hydrocarbon Contamination on Microbial Mat Functioning. Aubé, J., Senin, P., Bonin, P., Pringault, O., Jeziorski, C., Bouchez, O., Klopp, C., Guyoneaud, R., Goñi-Urriza, M. *Microbial Ecology*, 2020.

Surgical motion analysis using discriminative interpretable patterns. Forestier, G., Petitjean, P., Senin, P., Despinoy, F., Huauilmé, A., Fawaz, H.I., Weber, J., Idoumghar, L., Muller, P.A., Jannin, P. *Artificial Intelligence in Medicine*, 2018.

GrammarViz 3.0: Interactive Discovery of Variable-length Time Series Patterns. Senin, P., Lin, J., Wang, X., Oates, T., Gandhi, S., Boedihardjo, A.P., Chen, C., Frankenstein, S. *ACM Trans. Knowl. Discov. Data*, 2018.

STAVIS 2.0: Mining Spatial Trajectories via Motifs. Chen, C., Boedihardjo, A.P., Jenkins, B.S., Ellison, C.L., Lin, J., Senin, P., Oates, T. *International Symposium on Spatial and Temporal Databases*, 2017.

AREAS OF EXPERTISE

Advanced Analytics
Machine learning, NLP
Spatio-temporal mining
Health/Bio-informatics
Software engineering
Software metrology
Software process analysis

TECHNICAL SKILLS

Full SDLC, CI/CD
Infrastructure management
SOA, legacy wrapping
DBA, ORM & persistence
Linux, C/C++, bash
Java, R, Python, Go
HTML, XML, JavaScript
Microcontrollers & FPGA
TensorFlow, Spark
AWS, Data Bricks
Palantir Foundry

SOFTWARE PROJECTS

GrammarViz 3.0
- time series pattern mining
- parameters optimization

SAX-VSM
- time series classification
- behaviors discovery

JMotif-R
- time series mining toolkit

JMotif-SAX
- time series discretization

JMotif-GI
- grammatical inference

Hackystat
- software metrology

PERSONAL DETAILS

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