

# 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

(Data Scientist, 2017–2018)

#### *Tessella WCC*

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

2018–2019

#### *Western Digital*

Irvine, California

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

#### Research Associate, 2016–2017

(Research Technologist, 2007–2010)

#### *Los Alamos National Laboratory*

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)

2015

University of Hawai'i at Mānoa

Honolulu, HI, USA

#### MS, Computer Science (Capstone on MCMC simulation)

2007

University of Hawai'i at Mānoa

Honolulu, HI, USA

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

2002

Rostov State University (SFedU)

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., Huau, 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  
FPGA & Microcontrollers  
IoT, Raspberry & Arduino  
TensorFlow, Spark  
AWS, Databricks  
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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