

Pavel Senin

Data Science Software Engineer

PERSONAL SUMMARY



Interested in a 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

As an engineering lead, I am responsible for developing a digital product that focuses on analyzing spatial transcriptomics data for precision oncology and precision medicine. I am also the owner of this product, helping the teams get most of the spatial discovery studies. In addition, I am actively involved in developing software as a medical device (SaMD) for diagnosing rare diseases, including the clinical study and approval phases.

Lead Data Scientist/LM, 2019–2020 (Data Scientist, 2017–2018) *Tessella WCC* Toulouse, France

Managed GDPR compliance and artifact classification for Airbus, implemented conversational interfaces. Conducted root cause analysis and predictive maintenance for Schneider Electric, Liebherr-Aerospace, and Airbus. Conducted research on probability-of-defect models, flight anomaly discovery, and aeronautical simulations for Airbus. Led research program and served as line manager.

Data Scientist 2018–2019 *Western Digital* Irvine, California

Worked on identifying and evaluating IO-intensive computational kernels for prototyping of a new generation of 'smart' 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](#)

Transcriptome Profiling of Starvation in the Peripheral Chemosensory Organs of the Crop Pest *Spodoptera littoralis* Caterpillars. Poivet, E., Gallot, A., Montagné, N., Senin, P., Monsempès, C., Legeai, F., Jacquin-Joly, E. *Insects*, 2021.

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.

AREAS OF EXPERTISE

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

TECHNICAL SKILLS

Full SDLC, CI/CD, MLOps
Infrastructure management
SOA & legacy wrapping
DBA, ORM & persistence
Linux, C/C++, bash
Python, R, Java
JavaScript, PHP
TensorFlow, Spark
AWS, Databricks
Palantir Foundry
FPGA & Microcontrollers
IoT, Raspberry & Arduino
Network security

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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