## 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

senin@hawaii.edu

http://seninp.github.io

# Pavel Senin

## Data Science Software Engineer

### PERSONAL SUMMARY  👤

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

### EXPERIENCE  👥

**Principal Data Scientist**　　　　　　　　　　　　　　　current
*Sanofi*　　　　　　　　　　　　　　　　　　　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 '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 🔗

**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., Huaulmé,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.*