

# Nikolay Pavlovich Laptev

## CONTACT INFORMATION

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## EDUCATION



**Stanford University**, Stanford, CA USA

- Postdoc, Electrical Engineering, December 2018.
- Research topic: Neural network interpretation.
- Advisor: Ram Rajagopal.



**University of California Los Angeles**, Los Angeles, CA USA

- Ph.D., Computer Science, Distributed Systems, December 2012.
- M.S., Computer science, Machine Learning, June 2008
- Advisor: Carlo Zaniolo, Awards: NSF Scholar, GSR Scholarship.



**University of California Santa Barbara**, Santa Barbara, CA USA

- M.A., Economics with Emphasis on business, June 2007.
- B.S., Computer Science, June 2006.
- Regents Scholarship and Dean's Honor List.

## PROFESSIONAL EXPERIENCE

**Facebook**, Menlo Park, CA, USA

*Engineering Lead*

**Oct 2017 - Present**



- Engineering Lead and founder of real-time machine learning.

**Uber**, San Francisco, CA, USA

*Science Lead*

**Sep 2016 - Oct 2017**



U B E R

- Tech lead for applied machine learning focusing on deep learning research and applications to time-series forecasting and anomaly detection.

**Yahoo! Labs**, Sunnyvale, CA, USA

*Sr. Research Scientist*

**Jan 2013 - Sep 2016**



- Developed large scale models for ranking, recommendation, classification and anomaly detection used in production by millions of people.

**HRL Labs**, Internship, Malibu, CA, USA

*Research Scientist*

**Jun 2012 - Sep 2012**



- Developed prediction models together with an approximation for these models that work over 'Big Data' on Hadoop.

**Google**, Internship, Irvine, CA, USA

*Software Engineer*

**Jun 2011 - Sep 2011**



- Developed fault-tolerance and anomaly detection techniques for Google Real-Time Analytics.

**Teradata**, Internship, Los Angeles, CA, USA

*Software Engineer*

**Jun 2010 - Sep 2010**



- Developed a compiler that compiles Teradata UDFs into Hadoop MapReduce jobs.

**Citrix Systems**, Internship, Santa Barbara, CA, USA

*Software Engineer*

**2008 and 2009 Summers**



- Developed a distributed load-testing framework to test company's backend infrastructure for GoToMyPC products.

**Commission Junction**, Internship, Santa Barbara, CA, USA

*Software Engineer*

**2005 and 2006 Summers**



- Developed a framework for automated Customer Acceptance Tests.

## PUBLICATIONS

- Nikolay Laptev**, Jason Yosinski, Li Erran Li, Slawek Smyl, Time-series Extreme Event Forecasting with Neural Networks at Uber, ICML 2017
- J Balasubramanian, A Soni, Y Mehdad, **N Laptev**, Online Article Ranking as a Constrained, Dynamic, Multi-Objective Optimization Problem, FLAIRS 2017
- Xiaokui Shu, **Nikolay Laptev**, Danfeng Yao, DECT: Distributed Evolving Context Tree for Understanding User Behavior Pattern Evolution, EDBT 2016 (Full Paper)
- Xiaokui Shu, **Nikolay Laptev**, Danfeng Yao, DECT: Distributed Evolving Context Tree for Understanding User Behavior Pattern Evolution, AAAI 2016 (DEMO)
- Rob Hyndman, **Nikolay Laptev**, Earo Wang, Large-Scale Unusual Time Series Detection, ICDM 2015.
- George D Montanez, Saeed Amizadeh, **Nikolay Laptev**, Inertial Hidden Markov Models: Modeling Change in Multivariate Time Series, AAAI 2015
- Nikolay Laptev**, Saeed Amizadeh, Ian Flint, Generic and Scalable Framework for Automated Time-series Anomaly Detection, KDD 2015
- Iliaria Bordino, Nicolas Kourtellis, **Nikolay Laptev**, Youssef Billawala, Stock Trade Volume Prediction with Yahoo Finance User Browsing Behavior, ICDE 2014.
- Nikolay Laptev**, Kai Zeng, Carlo Zaniolo, Very Fast Estimation for Result and Accuracy of Big Data Analytics: the EARL System, ICDE 2013.
- Nikolay Laptev**, Tsai-Ching Lu, Carlo Zaniolo, BOOT-TS: A Scalable Bootstrap for Massive Time-Series Data, NIPS 2012.

**300+** citations. See more on **Google Scholar**.

## SELECTED TALKS

- ISF 2017, Cairns, Australia on Time-series modeling with Neural Network at Uber.
- Stanford 2017, Palo Alto, on Time-series special events modeling with Neural Network at Uber.
- FLAIRS 2017, Online Article Ranking as a Constrained, Dynamic, Multi-Objective Optimization Problem
- EDBT 2016, Bordeaux, France on DECT: Distributed Evolving Context Tree for Understanding User Behavior Pattern Evolution (talk).
- AAAI 2016, Phoenix, Arizona on DECT: Distributed Evolving Context Tree for Understanding User Behavior Pattern Evolution (demo).
- Georgia Tech 2015 & #lspe meetup, on Generic and Scalable Framework for Automated Time-series Anomaly Detection.
- ICDM 2015, Atlantic City, US on Large-Scale Unusual Time Series Detection.
- KDD 2015, Sydney, Australia on Generic and Scalable Framework for Automated Time-series Anomaly Detection.
- ICDE 2013, Brisbane, Australia on Very Fast Estimation for Result and Accuracy of Big Data Analytics: the EARL System.
- NIPS 2012, Lake Tahoe, Nevada, USA on A Scalable Bootstrap for Massive Time-Series Data.
- VLDB 2012, Istanbul, Turkey on Early Accurate Results for Advanced Analytics on MapReduce.
- ICDE 2012, Washington DC, USA on Optimization of Massive Pattern Queries by Dynamic Configuration Morphing.

## OTHER

Hobbies: Basketball league, open source (github: nlaptev), marathon runner.  
 Languages: English, Russian, Spanish.  
 Personality: A lot of enthusiasm and energy for solving difficult problems.

## REFERENCES

Mayur Deshpande, Google, Staff Software Engineer, nep@google.com  
 Youssef Billawala, Apple, Science Manager, ybillawala@gmail.com  
 Fran Bell, Uber, Sr. Manager, fran@uber.com  
 Carlo Zaniolo, UCLA, Professor, zaniolo@cs.ucla.edu