

ELEFThERIOS SOULAS

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OBJECTIVE

I aspire to do impactful applied research to solve real world problems using sciences. I wish to grow my expertise in the areas of: algorithms, machine learning, time series data analytics, natural language processing, psychology/neuroscience.

EDUCATION

New York University, Courant Institute of Mathematical Sciences, New York, NY *Oct. 2013-Dec. 2015*
Master of Science, Computer Science

- Concentration in Data Science and Machine Learning
- Current GPA: 3.8/4

Technical University of Crete, Chania, Greece *Oct. 2007-Jan. 2013*
5-year Bachelor Diploma, Electrical & Computer Engineering

- *Diploma Thesis*: Online Machine Learning Algorithms For Currency Exchange Prediction, Grade: 10/10
- *GPA*: 8.4/10 (top 3% of E.C.E. 2007 class).
- *Subject GPA*: 9.25/10
- Performance Fellowship Award (top 10% of the class), *academic years 2010-2012*

EXPERIENCE

Research Assistant at Courant Institute, NYU, New York, NY *Sept. 2014-*

- Meta-algorithms for ensemble machine learning classifiers.
- Online adaptation techniques due to concept drifting in time series
- Ensemble methods combine weighted linear(SVM) and non-linear(Random Forests) models.
- Concepts applied to stock time series and their relevant options.

Summer Analyst at Goldman Sachs (FICC Tech, GSBank), New York, NY *June 2014-Aug. 2014*

- Worked along with Strats to capture and model the commission fees from specific product trades.
- Migrated GSBank's secure database to a different entitlement system
- Fixed bugs in various applications

Summer Analyst at Capital K Partners hedge fund, Amsterdam, Netherlands *May 2013-July 2013*

- Stock exchange system debugging, resulting in correct precision order books, proper aggregated values and a faster representation
- Implementing my thesis prediction algorithms with live feed data, using Interactive Brokers API
- Developed multi-index hierarchical data structures for organizing/representing sparse tick data

Research Assistant at Courant Institute, NYU, New York, NY *Sept. 2012-Dec. 2012*

- Studied online machine learning algorithms on FX currency pairs
- Python coding for developing high speed data stream algorithms
- Refined Statstream, developed LearnStream. Published thesis can be found here

Programmer at Institute for Next Generation Systems, NCSU, North Carolina *June 2010-Aug. 2010*

- Designed and implemented distributed cloud framework for parallel SimPy executions

TECHNICAL SKILLS

Programming: Python, Java, C, C++, Matlab, SLANG, SQL, VHDL
Platforms/Tools: Eclipse IDE, Xilinx IDE/EDK, Hadoop, Lucene, TinyOS
Typesetting: L^AT_EX, Microsoft Office

SELECTED COURSEWORK

- Deep Learning (*ongoing*), Instr. Yann LeCun
Neural Network Image Classification Projects (CIFA-10, STL-10 Datasets) *NYU*
NLP Sentiment Analysis (Yelp Dataset)
- Machine Learning & Computational Statistics, Instr. David Sontag
Project On Airline Delay Prediction (Random Forests, P.C.A., R.O.C.)

- Financial Software Projects, Instr. Scott Burton
Bond Price & Risk(VaR) Calculator
- Computational Finance, Instr. Eran Fishler
Stock Exchange Implementation, Option Pricing Calculator (Monte Carlo Simulations)
- S.N.O.D.A.R. (Self Navigation Obstacle Detecting and Avoiding Robot)
- Trading AI agent for 2012 Worldwide TAC/Ad Auctions Competition
- Sensor network programming and synchronization
- Predicting Dow Jones Industrial Average using Dynamic Bayes Network
- NAO, AIBO Robot Programming

TUC

EXTRACURRICULAR ACTIVITIES

Ice Hockey, custom action figure making, PR-Manager at photographer/model agency.