Alex Paino

MACHINE LEARNING ENGINEER

San Francisco, CA

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Experience

Sift Science
San Francisco, CA

SOFTWARE ENGINEER - MACHINE LEARNING TEAM
August 2014 - PRESENT

- Working as a full-stack ML engineer doing everything from data collection through model training, tuning, and deployment.
- Developed an in-house random forest model that led to an 18% reduction in fraud detection error. (`http://bit.ly/2gy1PUT`)
- Led a several-person project that introduced new Content and Promotion abuse prevention products. (`http://bit.ly/2gSkl8A`)
- Designed a feature extraction framework capable of constructing and orchestrating a DAG of computaiton in a highly parallel fashion.
- **Technologies used**: MapReduce, Spark, Java, Python, Jupyter, HBase, HDFS

Facebook
Menlo Park, CA

SOFTWARE ENGINEER INTERN
May 2013 - August 2013

- Worked on the Ads Pacing team to prototype and deploy new pacing algorithms that led to significant increases in ROI for Ads customers.
- **Technologies used**: C++, Hack, Thrift, Hive, Presto

Microsoft
Redmond, WA

SOFTWARE DEVELOPMENT ENGINEER IN TEST INTERN
May 2012 - August 2012

- Worked in the Windows International Testing group on a variety of projects aimed at improving the effectiveness of the group's automated tests.
- **Technologies used**: C#, .NET

University of Missouri
Columbia, MO

UNDERGRADUATE RESEARCH ASSISTANT
January 2011 - May 2015

- Worked in Computational Intelligence Research Lab on an explosive hazard detection project (see Publications below).
- Researched various ways of applying Evolutionary Computation, including Genetic Programming and Genetic Algorithms, to image recognition.

The Genome Institute at the Washington University School of Medicine
St. Louis, MO

SOFTWARE ENGINEERING INTERN
May 2011 - July 2011

- Developed Android application that assists lab technicians when sequencing DNA.

Education

University of Missouri
Columbia, Missouri

B.S. IN COMPUTER ENGINEERING, B.S. IN MATH, MINOR IN COMPUTER SCIENCE
2010-2014

- GPA: 3.9/4.0

Selected Articles and Publications

ML Experiments at Sift Science, Part 1: Minimizing Bias
Sift Science Blog

ALEX PAINO
December 2016

- The first in a three-part series on ML experimentation at Sift Science, this post details how we minimize bias in offline experiments (`http://bit.ly/2gOdA7o`)

Large Scale Decision Forests: Lessons Learned
Sift Science Blog

ALEX PAINO
August 2015

- A write-up of 7 lessons learned during our project to implement and deploy an in-house random forest model (`http://bit.ly/2gy1PUT`)

A method of evolving novel feature extraction algorithms for detecting buried objects in FLIR imagery using genetic programming
SPIE 2014

ALEX PAINO; JAMES M. KELLER; MIHAIL POPESCU; KEVIN STONE
May 2014

- Used genetic programming to evolve computer vision feature descriptors similar to HOG and LBP (`http://bit.ly/2gmm7hf`)

Using evolutionary computation to optimize an SVM used in detecting buried objects in FLIR imagery
SPIE 2013

ALEX PAINO; MIHAIL POPESCU; KEVIN STONE; JAMES M. KELLER
May 2013

- Applied genetic algorithms to the task of hyperparameter selection for a multi-stage image recognition system (`http://bit.ly/2fXOIYU`)

Projects

Deep Text Corrector
October 2016 - Present

- Uses sequence-to-sequence models to automatically correct simple errors in conversational written English.
- Project already significantly outperforms an identity function baseline; read more and try it here: (`http://atpaino.com/dtc.html`)