

DATA SCIENCE LEADER AND CULTURE-BUILDER

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Overview

Data science executive building and deploying machine learning and algorithmic models in real-time customer facing applications.

Broad leadership experience across data scientists, software engineers, data analysts, and data engineers, having scaled-from-zero durable teams across disciplines and companies. Well-connected in Austin TX and beyond. Software engineering and leadership skills greatly facilitated a re-focus on data science and machine learning as writing code enabled rapid learning and hypothesis testing. Combining engineering and science to help companies unlock the value of their data as they pivot to modern algorithmic-based business models. Pivoted to machine learning engineering, which couples software sensibilities with algorithmic approaches to provide APIs and platforms which expose ML and AI to stakeholders.

Active in local meetups and conferences, presenting on a variety of Data Science and Machine Learning topics.

Experience_

Alegion, Inc

SENIOR DIRECTOR, MACHINE LEARNING

March 2019 -

- Ideated and architected Active Learning workflow coupling machine learning with human annotators, which provides significant workflow efficiency
- Delivered Amazon Web Server (AWS) Sagemaker and Fast R-CNN-based solution for image classification and object detection for retail fraud prevention use cases
- Delivered Kubeflow, Kubernetes, metrics, and DVC-based ML infrastructure, focusing on computer vision and natural language processing capabilities. This provides alternatives to the Sagemaker efforts, and gives greater model composition, reproducibility and data tracking
- Identified new product opportunities and developed new SKUs for efficient sales penetration
- Manage machine learning engineering and architecture team responsible for creating human-in-the-loop machine learning capabilities into the core product
- Assume roles of engineering leader, scrummaster, product owner, and team member as appropriate; skilled at blending Machine Learning and Software Engineering process techniques to deliver ML-based solutions
- Implemented and directed Alegion's intellectual property program by liaising between outside Counsel, internal inventors, and executive sponsors
- Active in local meetups, spoke at Data Day Texas in January 2020

DOSH, LLC

SENIOR DIRECTOR, DATA SCIENCE

Jan 2018 - Feb 2019

- Built a 9-person diverse team of Data Scientists, Data Analysts, and Data Engineers, all focused on evolving Dosh to a more data- and algorithmicoriented mobile-app company. The Data and Analytics team was responsible for Data Science, Business Intelligence and Data Engineering (e.g.
 building the data warehouse and data lake)
- · Collaborated with C-level business stakeholders to generate marketing campaigns, financial models, sales models, and investor-deck content
- Collaborated with technical stakeholders to create a data warehouse from application data and to create data pipelines feeding location data to AWS S3 buckets for graph analysis. Eliminated redundant RDBMS systems in-favor of AWS Redshift
- Built xgboost-based models predicting offer redemption (transactions) and deeply analyzed fraudulent behaviors and referral networks using R and various network analytics packages
- Lead transformation of company dashboards from 'vanity-metrics' to business-focused KPIs
- Directed Data Science efforts in predicting causal impact of multi-vendor markets and price elasticity

HomeAway, an Expedia Company

SENIOR DIRECTOR, DATA SCIENCE

Jul 2014 - Dec 2017

• Strengthened Algorithmic and Machine Learning muscle through project-based leadership. Partnering with disparate product lines to answer questions quicker, and find new questions faster. Evangelized data-informed decision making across company and with key executives, leading to the formation of the HomeAway Data Science Team. Built and directed 25 person team consisting of PhD Data Scientists and Machine Learning Engineers

- Team projects included competitive intelligence, fraud detection, unstructured and semi-structured data mining, search result ranking, photo analysis, and price and occupancy predictions
- Bayesian and frequentist multi-variate test analysis in R
- · Introduced natural language processing, machine learning and defensible statistical inference
- · Multiple team and individual presentations on ML efforts and affects to C-level audiences
- Created and lead 100+ volunteer "science club", all trying to swipe right for science
- Partnered with the UT McCombs School of Business, providing guidance and data for the Business Analytics program participant capstone
 projects. Acted as an external ambassador through public speaking at various events. Built internal credibility around a scientific method to
 AB Testing and algorithmic approached to business problems
- Collaborated with Data and Software Engineering organizations to prototype and select big-data solutions based on Hadoop (HDFS, Hive) and Spark

HomeAway, an Expedia Company

DIRECTOR, SOFTWARE ENGINEERING

Jun 2010 - Jul 2014

- Directed 25-person team responsible for the Orders and Payments Platform services. The team consisted of Engineers and Architects of all levels and areas in "the stack" (UX/UI, web-tier, service layer, ...)
- · Worked closely with CFO, CTO, and CPO as the services handled much of HomeAway's revenue
- Lead development and enhancement of PCI Compliant "payment island". Architected and implemented payment gateway router which sends transactions from clients to any one of several payment gateways (e.g. Cybersource, Payflow Pro, Yapstone, and Trident)
- Established HomeAway Inventions Program, which is responsible for identifying, cataloging and protecting intellectual property. Sole- or Co-Inventor on several pre-patent inventions
- Technical member of global payment processor negotiation team, responsible for technical evaluation and diligence for HomeAway's successful selection of a global payment processor
- Team Lead delivering Unified Payments Services, PCI and SOX compliance, and migrating vertical payment flows to common service-based API

PayPal, Inc

PRINCIPAL SOFTWARE ENGINEER

Mar 2007 - Jun 2010

- Implemented two-factor authentication system (via hardware token) for PayPal and eBay
- Formed small team to introduce Agile Software Development methodologies to PayPal, received executive support and developed training material
- (Certified) Scrummaster for next-gen (now current gen) view-layer technology

PayPal, Inc

Engineering Manager, Software Development

Mar 2008 - Jul 2009

• Lead development of the content management system for PayPal's marketing department

Visa, Inc

SOFTWARE ENGINEER

Nov 2000 - Mar 2007

- · Managed Corporate Card Expense Reporting service for large, multi-national financial institutions
- Implemented central directory server for Verified by Visa
- Developed reference standard Directory Server for Verified by Visa(tm) implementation of the Three D Secure payment protocol
- Lead testing and qualification efforts for Verified by Visa(tm) certifications

Globeset, Inc

SOFTWARE ENGINEER

Feb 1998 - Nov 2000

• Introduced Java to the development process. Wrote monitor applications to ensure highly-available services

Education

The Santa Fe Institute

COMPLEX SYSTEMS SUMMER SCHOOL 2015

University of Southern California

BSc - ELECTRICAL ENGINEERING

1990

Carroll College

BA - MATHEMATICS

1990

Volunteering_

City of Austin Business & International Affairs Focus Group

Industry Consultant Jan 2018 -

• Focusing on Austin TX's outreach to both business and international affairs

Skillpoint Alliance

CHAIRMAN OF THE BOARD, BOARD MEMBER

Feb 2012 - Sep 2016

• Skillpoint Alliance builds partnerships between industry, education, and the community to provide a more qualified workforce for Central Texas

UT McCombs School of Business, Masters of Science, Business Analytics

INDUSTRY ADVISER May 2015 -

• Advising McCombs on Industry needs for Data Science related curricula

Certifications _____

Nov 2017 Neural Networks and Deep Learning (Python / Keras)	Coursera
Sept 2014 R Programming	Coursera
Sept 2014 The Data Scientists Toolbox	Coursera
June 2008 Certified Scrummaster	Rally, Inc.

Patents_

USPTO

 ${\sf US9928498B2\,SYSTEM, apparatus\,and\,method\,for\,segregating\,data\,in\,transactions\,via\,dedicated\,interface}$

ELEMENTS FOR ISOLATED LOGIC AND REPOSITORIES

2018-03-27

USPTO

US10339487B2 SYSTEMS AND METHODS TO RECONCILE FREE-TEXT WITH STRUCTURED DATA

2019-07-02

FEBRUARY 2020