KYLER EASTMAN

Austin, TX
512 797 7275 | kylereastman.github.io
kyler.eastman@gmail.com

PROFILE

I'm an experienced data scientist well versed in extracting meaning from a wide variety of data structures, from millions of GPS tracks to app usage data to consumer surveys. My current work is developing both physiological and psychographic models of consumer behavior and translating those models into tangible business assets including algorithms, segmentation features, business intelligence and visualizations.

SKILLS

- 10 years of statistics, machine learning algorithms, experimental design, and signal processing in research and business settings
- SQL (Redshift, MYSQL, BigQuery), Python (Pandas, Ski-kit Learn, Basemap, Matplotlib, Numpy & Scipy), MATLAB, PySPARK, Qubole, Google Analytics, Tableau

WORK HISTORY

SENIOR DATA SCIENTIST, UNDER ARMOUR CONNECTED FITNESS **2015-PRESENT**

Led cross-functional teams of program managers, software developers, and business analysts to develop insights from fitness and app data from 170 million users.

- Built a classifier using DBSCAN and Ramer Douglas Puecker to automatically identify GPS tracks as participants in running races, making a world-wide event dashboard in Tableau (patent pending) and a unique segmentation feature
- Applied a random forest classifier to a combined dataset of workout data and app usage (BigQuery) to develop a predictive model of engagement
- Built a detection method for determining cheaters within virtual challenges, increasing the inherent value of a core revenue-generating product
- Developed consumer segmentation cohorts from a combined dataset of GPS fitness data and consumer surveys using PCA and clustering methods

PERFORMANCE DATA SCIENTIST, UNDER ARMOUR CONNECTED FITNESS **2013-2015**

Worked with sport scientists across Under Armour on research and development efforts concerning both small datasets (hundreds) of high-end physiological performance data and large datasets (millions) of consumer fitness data.

- Built a prototype running route recommendation service by encoding GPS tracks into a graph database (patent pending)
- Developed a client-facing recovery dashboard for the University of Notre Dame Men's Soccer Team
- Developed and validated energy expenditure algorithms that were implemented on Under Armour's first wearable activity tracker, the UA Band.

R & D ENGINEER, MAPMYFITNESS, AUSTIN, TX **2012-2013**

Developed and validated state-of-the-art algorithms for extracting speed, distance, calories, and other physiological parameters from noisy (GPS) fitness data.

- Developed a method for running gait analysis using neuroscience-inspired feature extraction methods on smartphone accelerometer data (patent pending), determining cadence, ground contact time, and left/right asymmetry
- Developed the MapMyFitness algorithm for determining elevation gain from GPS timeseries; compared four different optimized methods against a gold-standard dataset of thousands of altimeter readings, reducing error by 50%
- Created visualizations for promotional materials shown at a variety of trade shows and conferences, including CES and SXSW

POST DOCTORAL RESEARCHER, CENTER FOR PERCEPTUAL SYSTEMS, UT AUSTIN **2008-2012**

Primary developer of electrophysiological experiment software, which included hardware/software integration, real-time programming, & solving human factors issues.

- Created PLDAPS: an open-source MATLAB electrophysiology toolbox that enables researchers to flexibly design their own experiments. Published in Frontiers of Neuroinformatics, this toolbox created unprecedented productivity in the UT Perceptual Decision-Making Lab, and is being adopted at labs around the country.
- Performed electophysiological experiments on awake-behaving monkeys, simultaneously recording single and multi-unit neural potentials, spike trains, and eye-tracking behavior; participated in surgical procedures

GRADUATE STUDENT, PSYCHOLOGY DEPARTMENT, UT AUSTIN **2003-2008**

- Dissertation: used a Bayesian ideal observer model to evaluate subjects' abilities to integrate probabilistic evidence within a varying but well- defined reward structure
- Master's: Developed desktop and immersive VR experiments (in Python) to compare vestibular and proprioceptive contributions to wayfinding and route learning in large-scale spaces (mazes)

ANALYST/PROGRAMMER, NEUROSCIENCE DEPARTMENT, BROWN UNIVERSITY **1999-2003**

- Developed a bio-sonar signal processing model in echolocating bats, translating neurological findings into algorithms capable of being implemented in VLSI hardware
- Developed a 2D auditory simulation environment (MATLAB) to explore bat biosonar signal detection issues during bug pursuit

- Developed a 3D reconstruction of bat flight patterns and chirp signatures with ultrasonic microphones and infrared cameras

EDUCATION

UNIVERSITY OF TEXAS AT AUSTIN, AUSTIN TX

- Doctorate, Cognitive Psychology
- Master of Science, Cognitive Psychology

UNIVERSITY OF TEXAS AT AUSTIN, AUSTIN TX

- Doctorate, Cognitive Psychology
- Master of Science, Cognitive Psychology

BROWN UNIVERSITY, PROVIDENCE, RI

- Bachelor's of Science, Applied Mathematics: Scientific Computing