Kyler Eastman, PhD

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Skills

- coding languages – Python, MATLAB, SQL, Hadoop/Spark
- math and statistics - signals, machine learning, algorithm development & optimization
- exercise physiology – energy expenditure, heart rate variability, performance management
- fitness industry – engaging visualizations, health data productization,

Experience

Performance Data Scientist – Under Armour Connected Fitness, Austin, TX

- developed and scaled two unreleased (7/15) GPS features (4 patents pending)
- developed visualizations for South by Southwest, the UA Brand House in Soho, UACF headquarters
- designed caloric algorithms for the UA's first wearable, the HTC Grip
- Conducted the first large-scale consumer segmentation survey for UA

Research and Development Engineer – MapMyFitness, Austin, TX 2012 - 2013

- GPS accuracy: developed evaluation framework leveraging bicycle wheel track time-series as an independent source of speed and distance, compared six distinct algorithms, the best of which reduced both accuracy and lag by 30%
- Gait Analysis: developed algorithms for parsing and storing an evolving stride signature from the iPhone, producing metrics such as stride rate, contact time, left/right asymmetry (1 patent pending)
- developed a wide network of relationships with academic subject matter experts in biomechanics, heart rate variability, energy expenditure and public health

Postdoctoral Research Engineer, Center For Perceptual Systems, UT Austin, Austin TX

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

Education

- University of Texas - Austin, Austin, TX — Ph.D., Cognitive Psychology, 2008
- University of Texas - Austin, Austin, TX — M.A., Cognitive Psychology, 2005
- Brown University, Providence, RI — Sc.B., Applied Math: Scientific Computing, 1998

Selected Publications

- Hirsch, J. A., James, P., Robinson, J. R., Eastman, K. M., Conley, K. D., Evenson, K. R., & Laden, F. (2014). Using MapMyFitness to place physical activity into neighborhood context. *Frontiers in public health*, *2*.
- Eastman, K. M., & Huk, A. C. (2012). PLDAPS: a hardware architecture and software toolbox for neurophysiology requiring complex visual stimuli and online behavioral control. *Frontiers in neuroinformatics*, *6*.
- Eastman, K., Stankiewicz, B., & Huk, A. (2007). Optimal weighting of speed and accuracy in a sequential decision-making task. *Journal of Vision*, *7*(9), 428-428.
- Eastman, Kyler M., and James A. Simmons. "A method of flight path and chirp pattern reconstruction for multiple flying bats." *Acoustics Research Letters Online* 6.4 (2005): 257-262.

Additional Information

Built 2D motion capture bike fit studio using infrared LEDs taught math for 2 years at a boarding school coached the UT cycling team to conference championships have run 2 half-marathons, 7 trail races, and >300 bicycle races in the US and Europe (category 3)