WILLIAM K. MOIK

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SUMMARY OF QUALIFICATIONS

Proactive and quick-learning **research engineer** with versatile experience in data analysis, predictive modeling for medical applications, web development, blockchain development, and photography. Talent for communicating software and programming concepts to non-computer experts.. Expertise in Python, Javascript, Solidity, Git, Linux, CSS, HTML and Matlab.

EXPERIENCE

Etiometry Inc, Boston, MA *January 2014 – March 2017*

Research Engineer II

- Developed a predictive model and algorithm in python and matlab to inform clinicians of a patient's respiratory state in real-time; being piloted in three institutions in the US and will effectively double the target population of Etiometry's products; under FDA review
- Analyzed and managed hundreds of medical data sets with functional python scripts; results were used in developing physiological relationships such as the oxy-hemo dissociation curve
- Gained familiarity and expertise in the linux command shell, using git in a team environment, and statistical tools like machine learning and control theory techniques such as Bayesian inference and particle filtering
- Trained over a hundred clinicians and nurses for three hospitals; selected for my communication skills and expertise in physiology, mathematics, and software

Sensory Substitution Device for the Visually Impaired, Boston, MA *September 2013 – May 2014*

Senior Capstone Project

- Designed and programmed Arduino software for an assistive electronic glove prototype; the software analyzed multi input data to warn the visually impaired of obstructions undetectable by the user's cane
- Awarded 2nd place in the national competition Design by Biomedical Undergraduate Teams (DEBUT) held by the National Institute of Health where we received $15,000 in award prize

Boston University Visual Information Processing Lab, Boston, MA *January 2013 – September 2013*

Research Assistant

- Designed and implemented 3 different methods in Matlab to generate synthetic gestures unique to individuals' sample gestures to test feasibility of identity theft in for gesture password systems
- Applied machine learning, regression analysis, PCA, dynamic time warping, and animation techniques to create spatially and dynamically similar gestures

Outlier Color Identification for Search and Rescue, Boston, MA *September 2013 – December 2013*

Digital Image Processing and Communication Project

- Created color anomaly detection methods in search and rescue images from UAVs using LAB color space covariance matrices (RX Detector), feature densities, and techniques such as stochastic processes, Markov models, and k-means clustering; achieving an AUC of 0.9968

  Technical report at http://iss.bu.edu/data/jkonrad/reports/MRWM13-03buece.pdf

PERSONAL PROJECTS

Frogger Clone - www.willmoik.com/frogger *June 2017 - Present*

- Created common project game "Frogger" to practice object-oriented programming
- Added more classes and changed the render engine to allow the user to interact with the background

Website Development, Boston, MA *March 2017 - Present*

- Developed websites using the bootstrap framework and templates;
  www.willmoik.com | www.sakurashiatsumassage.com | www.stokedhoney.com

EDUCATION

Boston University College of Engineering, Boston, MA

Bachelor of Science, Biomedical Engineering, May 2014;

GPA: 3.69/ 4.00; Magna Cum Laude

SKILLS AND INTERESTS

Software: Javascript, Python, HTML, CSS, Git, Linux, Matlab, Jira, Confluence, Lightroom, Photoshop

Interests: Rock Climbing, Travel, Running, Photography, Hiking, Snowboarding, Ultimate Frisbee