



Gene Shuman, PhD

Assistant Professor, Information Sciences and Technology

Education

PhD, Computer Science, George Mason University

Key Interests

Data Mining | Machine Learning | Biomechanics | Electromyography | Predictive Analytics | Software Engineering | Project Management | Python Programming

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SELECT PUBLICATIONS

- › G. Shuman, *et al.*, Classifying Continuous Hand Grips and Movements Using Myoelectric and Accelerometer Signals, *IEEE BIBM Conference*, (2017).
- › G. Shuman, *et al.*, Improving the recognition of grips and movements of the hand using myoelectric signals, *BMC Medical Informatics and Decision Making*, vol. 16(2), (2016).

Research Focus

My research focuses on using machine learning techniques to make predictions and as an aid in decision making. I've used these in a biomedical application in which electrical signals measured in a person's forearm are used to recognize the grips or movements of the hand attached to the forearm. One obvious use is to help an amputee direct the movement of a prosthetic hand, a la Luke Skywalker. I'm also interested in the general area of software engineering, including programming, teaching programming, and software development management. I am currently teaching in that area but am not doing active research.

Current Projects

- On-going development of courses, both online and face-to-face, in Python Programming, *Object-Oriented Programming, Data Structures and Algorithms*.