Joseph Lilleberg

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EDUCATION

University of California San Diego   2016–2018
M.S. Computer Science - focus of Programming Languages, Compilers, and Software Engineering
- Cumulative GPA: 3.487/4.0

Southwest Minnesota State University   2012–2016
B.S. Computer Science, B.A. Mathematics
- Cumulative GPA: 3.81/4.0

WORK EXPERIENCE

University of North Texas   2015
Summer Research for Undergraduates in Computer Security | NSF funded research internship
- Prestigious competitive research opportunity with 5.3% acceptance rate; 10 selected applicants from a pool of 187.
- Researched the potential role brain wave scanners can play in computer security in Android and PC mediums.
- Developed applications to guess what predetermined number or image the user is thinking based on fluctuations in the readings of EEG waves.
- Wrote 80%+ of code base to process and filter raw EEG data from brain wave scanners using C#, Java, and Python.

Georgia State University   2014
Summer Research for Undergraduates in High Performance Data Mining | NSF funded research internship
- Prestigious competitive research opportunity with 4.8% acceptance rate; 10 selected applicants from a pool of 208.
- Implemented an algorithm to categorize documents into a fixed number of predefined categories using Google's word2vec.
- Analyzed the accuracy of up to 18,000 text posts over 20 categories with word2vec using python and tf-idf; ∼90% accuracy.

SELECTED PROJECTS

Gauging Divergent Thinking In Visual Tasks Through Pupillometry and Eye Tracking 2018
https://github.com/NyvrMore/pupilparser
- Explored the correlation between the output of a visual task designed to induce divergent thinking and the participants pupil dilation and blink frequency using Pupil Labs open source eye tracking software
- Extracted, parsed, and assessed incoming data received from tracking the eye movement of 25 individuals using Python contributing to 100 lines of code; 40% of codebase.

Forkhub   2017
https://github.com/NyvrMore/ForkHub.git
- Refractored open-source project ForkHub using defensive design techniques for better scalability in an Android environment.
- Modularized 200+ lines of code using pattern matching, transformation, and visualization tools such as DIP, DbC, and AspectJ.

Peers   2017
https://github.com/NyvrMore/peers.git
- Developed an app to connect like minded individuals across UCSD to improve interdisciplinary research collaboration .
- Backend development for managing database functionality and communication with frontend using AWS: DynamoDB, Lambda, Cognito, API Gateway, and Simple Email Services.

SKILLS AND INTERESTS

Programming: Python, Java, SQL, C++, C#, OCaml, Haskell — **Web Technologies**: HTML, Javascript, CSS, Node.js, Reactjs, Bootstrap, Jquery, ExpressJS — **Tool Technologies** Git, Docker, AWS, Unix

PUBLICATIONS

J. Lilleberg, Y. Zhu and Y. Zhang, "Support vector machines and Word2vec for text classification with semantic features," 2015 IEEE 14th International Conference on Cognitive Informatics Cognitive Computing (ICCI*CC), Beijing, 2015, pp. 136-140. doi: 10.1109/ICCI-CC.2015.7259377