MIKAYLA TIMM

github: mtimm100 ⋄ website: mtimm100.github.io
850-502-7787 ⋄ mtimm100@gmail.com

EDUCATION

University of Massachusetts Amherst *September 2017 - Present*
MS/Ph.D. in Computer Science, advised by Subhransu Maji

University of West Florida, 3.99 GPA, Summa Cum Laude *2014-2017*
BS in Computer Science, Minor in Mathematics

RESEARCH EXPERIENCE

University of Massachusetts Amherst September 2017 - Present
Graduate Research Assistant - Computer Vision Research Laboratory

· Researching computer vision techniques for fine-grained visual categorization of animals at the species level and individual level.

MIT Lincoln Laboratory June 2017 - August 2017
Summer Research Intern - Group 104 (Intelligence and Decision Technologies)

· Researched natural language processing techniques for generating word embeddings in the multilingual context to enable performing NLP tasks on inherently multilingual data, such as tweets.
· Developed a system for processing multilingual text corpora, training word embeddings, visualizing the resulting high dimensional vectors in a 2D space, and performing intrinsic evaluations on the embeddings, such as analogies and nearest neighbors.

University of West Florida September 2016 - May 2017
Wearable Device Security Research Assistant

· Utilized supervised learning algorithms to classify biometric data obtained from simulated wearable device cyber attacks.
· Helped collect and label wearable device data, performed simulated device synchronization attacks over Bluetooth, and built models to understand what data was obtained from the synchronization packets.

University of West Florida May 2016 - August 2016
Summer Undergraduate Research Scholar

· Researched machine learning techniques for predicting outcomes of animals in shelters.
· Performed data analytics on animal shelter data to observe relationships between animal attributes and outcomes.

University of Massachusetts Amherst May 2015 - August 2015
REU Student Researcher - Computer Vision Research Laboratory

· Researched computer vision algorithms for identifying individual jaguars in images to assist ecologists with their conservation efforts.
· Worked together with the UMass Department of Environmental Conservation to collect and label images.
· Implemented a system for performing automatic jaguar identification invariant to changes in scale, rotation, translation, illumination, and partial occlusion.

PROGRAMMING LANGUAGES AND PROJECTS

Languages	C, Java, MATLAB, Python, C#, R, SAS, SQL, LISP, Prolog
Projects	Plagiarism detection program for analyzing similarity between files
	Programmed iRobot Create to give university tours using sensors and speakers
	Shell program for parsing commands and running distributed computing applications
	Queue simulation program for analyzing throughput for service channels
	Genetic algorithm approach to solving the Traveling Salesman Problem
	LL(1) recursive descent parser that generates assembly code for arithmetic operations
	Library of various numerical approximation algorithms
	Backend for Pokemon Go-style mobile app for introducing students to UWF campus

ACHIEVEMENTS

UMass Amherst CICS Edward Riseman and Allen Hanson Scholarship	*Fall 2017*
Grace Hopper Celebration of Women in Computer Scholarship	*Fall 2016*
UWF Computer Science Nick Johnson Academic Scholarship	*Fall 2016*
UWF IT Performance Scholarship	*Fall 2016*
UWF Outstanding Undergraduate Student in Computer Science Award	*Spring 2016*
UWF Office of Undergraduate Research Best Student Project in Computer Science	*Spring 2016*
1st Place in Division 2 ACM International Collegiate Programming Contest, UWF site	*Fall 2015*
UWF Nautilus Scholarship	*Fall 2014-Spring 2017*
Florida Bright Futures Academic Scholars Award	*Fall 2014-Spring 2017*

PUBLICATIONS

- **Timm, M.**, El-Sheikh, E. (2017). **An Evaluation of Machine Learning Algorithms for Prediction of Shelter Animal Outcomes.** In A. Bossard, G. Lee, & L. Miller (Eds.), Proceedings of 32nd International Conference on Computers and Their Applications, March, 20-22, 2017, Honolulu, Hawaii, USA (pp. 119124). Winona, MN, USA: ISCA.
- Reichherzer, T., **Timm, M.**, Earley, N., Reyes, N., & Kumar, V. (2017). **Using machine learning techniques to track individuals & their fitness activities.** In A. Bossard, G. Lee, & L. Miller (Eds.), Proceedings of 32nd International Conference on Computers and Their Applications, March, 20-22, 2017, Honolulu, Hawaii, USA (pp. 119124). Winona, MN, USA: ISCA.