Princess Priscilla Lyons CV

3611 SW 34th Ave, Apt. 53, FL 32608 | 312.208.3275 | plyons@ufl.edu

EDUCATION

Dec 2019 — **University of Florida, Master of Science in Engineering** — Gainesville
Major: Electrical and Computer Engineering
GPA: 3.5/4.00

May 2017 — **University of Missouri, Dual Bachelor of Science in Engineering** — Columbia
Major: Electrical and Computer Engineering
Minor: Computer Science, Mathematics and Spanish
GPA: 3.16/4.00

WORK HISTORY

Aug 2017 – Present — **University of Florida: Graduate Research Assistant** — Gainesville, FL
Conducted research utilizing techniques in machine learning, image processing and pattern recognition
Compared unsupervised and supervised anomaly and target detection methods in synthetic aperture sonar imagery
Analyzed feature representations of writing style in various languages using machine learning and data analytics techniques

May 2017 – Jul 2017 — **Lockheed Martin – Space Systems: Software Engineering Intern** — King of Prussia, PA
Cloned and imaged numerous servers with Microsoft Server 2012
Installed and configured various security and software patches for server stations
Created a C++ software tool to parse SDAS files of a switch matrix and located errors in the hardware configuration
Developed a C++ software tool to parse SDAS files of a switch matrix and return all USB device name, GUIDs and paths to the user

Jun 2016 – Aug 2016 — **Lockheed Martin – Space Systems: Software Engineering Intern** — King of Prussia, PA
Collaborated with a team of software engineers on an independent research and development project
Developed a C++ driver to interface with a Serial I/O SIO4 board using a RS422 communication standard on a RedHawk Linux real-time operating system
Utilized the Hardware-in-the-Loop(HWIL) technique to troubleshoot and perform successful transmissions and receptions of data with a serial I/O SIO4 board for an integrated flight simulation

Feb 2015 – May 2017 — **University of Missouri: Undergraduate Research Assistant** — Columbia, MO
Researched various machine learning algorithms and techniques
Cooperated with a team of interdisciplinary researchers to detect the target signature of HLB infected orange trees in Florida using hyperspectral analysis
Conducted experiments on bed-sensor ballistocardiogram signals using Extended Functions of Multiple Instances (eFUMI) algorithm to successfully detect heartbeat signatures resulting in a publication (listed above)

Oct 2013 – Feb 2015 — **University of Missouri Research Reactor: Student Technician** — Columbia, MO
Served as a computer assistant for 15 hours per week in computer hardware and desktop support for facility's 100+ employees
Imaged numerous company desktop computers, installed necessary Windows applications, and troubleshoot Windows OS and computer hardware problems
Worked with a team of 5 technicians to configure facility servers and mandate internet and computer security protocol
Performed monthly maintenance on the MURR laptops, desktops and printers throughout the entire facility

Sep 2012 – Oct 2013 — **University of Missouri – Learning Center: Professional Algebra Tutor** — Columbia, MO
Tutored students of different grades for 15 hours per week in intermediate and college algebra
Conducted private study sessions with up to 3 algebra students and assisted in larger walk-in tutoring sessions with fellow tutors

Created algebra examples with problematic solutions in order to clarify algebra concepts
Utilized online resources, such as WebWork and WebAssign, daily to guide students in their algebra schoolwork

PUBLICATIONS

CONFERENCE

P. Lyons, D. Suen, A. Galusha, A. Zare and J. Keller, "**Comparison of prescreening algorithms for target detection in synthetic aperture sonar imagery**," *Proc. SPIE Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIII*, vol. 10628, pp. 387–394, Apr. 2018. doi: 10.1117/12.2305175

C. Jiao, **P. Lyons**, A. Zare, L. Rosales and M. Skubic, "**Heart beat characterization from ballistocardiogram signals using extended functions of multiple instances**," *2016 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Orlando, FL, 2016, pp. 756-760. doi: 10.1109/EMBC.2016.7590812

JOURNAL

C. Jiao, B. Su, **P. Lyons**, A. Zare, K. C. Ho and M. Skubic, "**Multiple Instance Dictionary Learning for Beat-to-Beat Heart Rate Monitoring From Ballistocardiograms**," in *IEEE Transactions on Biomedical Engineering*, vol. 65, no. 11, pp. 2634-2648, Nov. 2018. doi: 10.1109/TBME.2018.2812602

PRESENTATIONS

2019 Oral presentation "Anomaly and Target Detection in Synthetic Aperture SONAR," **University of Florida, Department of Electrical and Computer Engineering**, Masters Thesis

2018 Oral presentation "Comparison of prescreening algorithms for target detection in synthetic aperture sonar imagery," **Society for Optics and Photonics (SPIE) Defense + Commercial Sensing**

2016 Poster presentation "Heart beat characterization from ballistocardiogram signals using extended functions of multiple instances," 38th Annual **International Conference of the IEEE Engineering in Medicine and Biology Society** (EMBC)

HONORS AND AWARDS

Aug 2017 – Dec 2019 University of Florida Graduate Assistantship
May 2017 University of Missouri Honors Scholar
May 2016 University of Missouri, College of Eng., Celebration of Women in Engineering Honoree
Aug 2011 – May 2017 University of Missouri Diversity Award
Fall '14 University of Missouri Dean's List

LEADERSHIP

Fall '16 – Fall '17 **Treasurer** - Institute of Electrical and Electronics Engineers (IEEE)
Fall '15 – Fall '16 **Secretary** - Institute of Electrical and Electronics Engineers (IEEE)
Fall '14 – Fall '15 **Student Ambassador** – Univ. of Missouri College of Engineering Ambassadors

MEMBERSHIPS

2015 – Present INROADS Scholar Alumni
2014 – Present Griffiths Leadership Society of Women (2014-Present)
2013 – Present National Society of Black Engineers (NSBE)
2013 – Present Institute of Electrical and Electronics Engineers (IEEE)
2013 – Present Association for Computing Machinery (ACM)
2012 – Present Mizzou Collegiate Scholars