

# Princess Priscilla Lyons CV

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## EDUCATION

Dec 2019	<b>University of Florida, Master of Science in Engineering</b> Major: Electrical and Computer Engineering GPA: 3.46/4.00	Gainesville
May 2017	<b>University of Missouri, Dual Bachelor of Science in Engineering</b> Major: Electrical and Computer Engineering Minor: Computer Science, Mathematics and Spanish GPA: 3.16/4.00	Columbia

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## WORK HISTORY

Aug 2017 – Present	<b>University of Florida: Graduate Research Assistant</b> Conducted research utilizing techniques in machine learning, image processing and pattern recognition Cooperated with a team of researchers from remote universities to develop an underwater environmentally adaptive target characterization and detection system Compared and developed unsupervised and supervised anomaly and target detection methods in synthetic aperture sonar (SAS) imagery Analyzed feature representations of writing style in various languages using machine learning and data analytics techniques	Gainesville, FL
May 2017 – Jul 2017	<b>Lockheed Martin – Space Systems: Software Engineering Intern</b> 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	King of Prussia, PA
Jun 2016 – Aug 2016	<b>Lockheed Martin – Space Systems: Software Engineering Intern</b> 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	King of Prussia, PA
Feb 2015 – May 2017	<b>University of Missouri: Undergraduate Research Assistant</b> 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)	Columbia, MO
Oct 2013 – Feb 2015	<b>University of Missouri Research Reactor: Student Technician</b> 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	Columbia, MO
Sep 2012 – Oct 2013	<b>University of Missouri – Learning Center: Professional Algebra Tutor</b> Tutored students of different grades for 15 hours per week in intermediate and college algebra	Columbia, MO

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

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## 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

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## PRESENTATIONS

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| 2019 | Oral presentation "Anomaly and Target Detection in Synthetic Aperture SONAR," <b>University of Florida, Department of Electrical and Computer Engineering</b> , Masters Thesis   |
| 2018 | Oral presentation "Comparison of prescreening algorithms for target detection in synthetic aperture sonar imagery," <b>Society for Optics and Photonics (SPIE) Defense + Commercial Sensing</b>  |
| 2016 | Poster presentation "Heart beat characterization from ballistocardiogram signals using extended functions of multiple instances," 38th Annual <b>International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)</b> |

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## HONORS AND AWARDS

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| 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, Fall '16  | University of Missouri Dean's Lists  |

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## LEADERSHIP

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

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## MEMBERSHIPS

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| 2015 – Present | INROADS Scholar Alumni                                   |
| 2014 – Present | Griffiths Leadership Society of Women                    |
| 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                               |